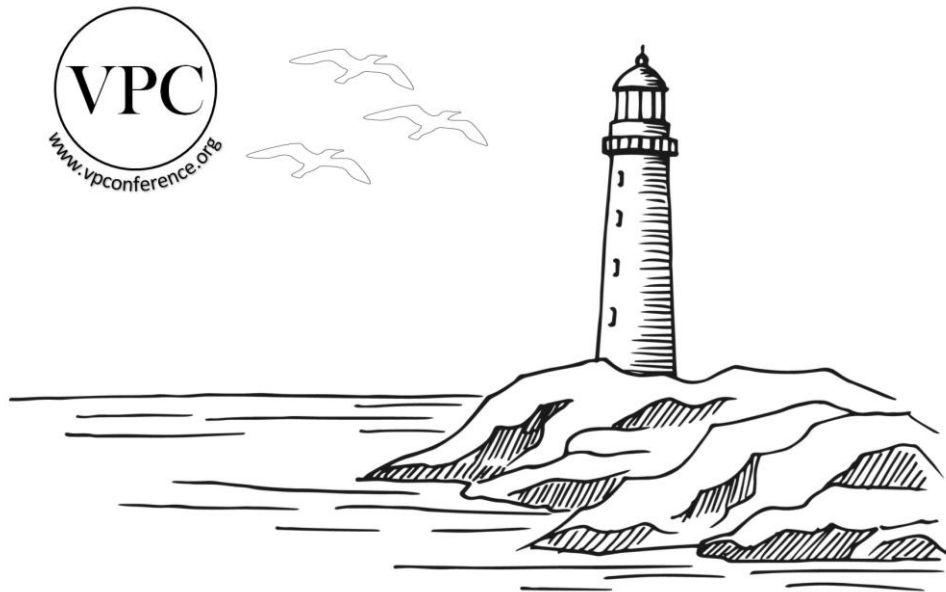


31st VERTEBRATE PEST CONFERENCE

**March 11-14, 2024
Monterey, California**

THE VERTEBRATE PEST COUNCIL



Conference Chair:
Niamh Quinn

Program Chair:
Laura Snell

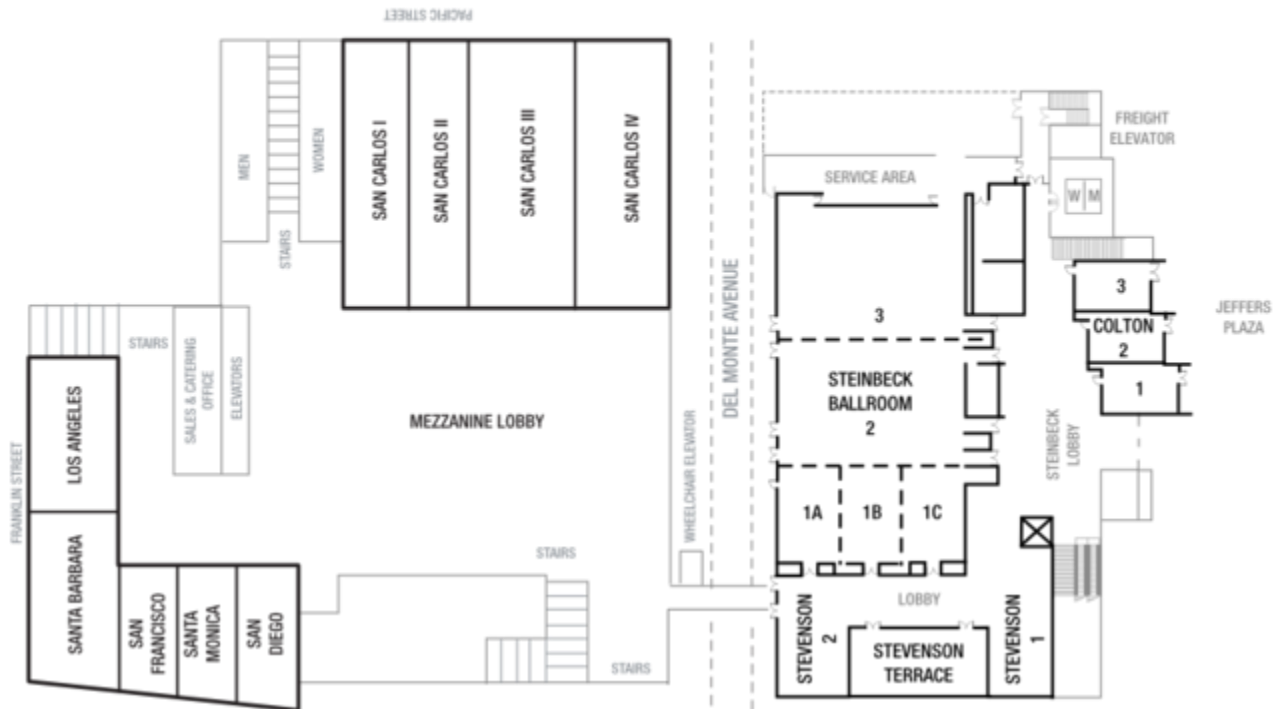
Includes special symposia:

- **Pest and Beneficial Bird Management**
 - **Commensal Rodents**
 - **Predator Management**
- **New Frontiers in Managing Wild Pigs**

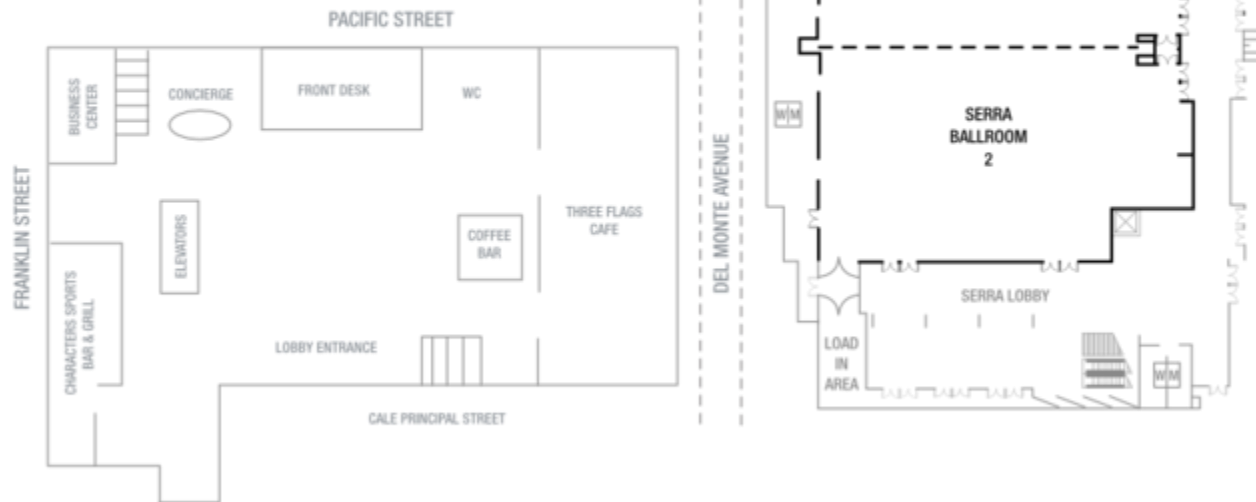
Organized by:
The Vertebrate Pest Council

Monterey Marriott

MEZZANINE FLOOR



GROUND FLOOR



WELCOME

Welcome to the 31th Vertebrate Pest Conference. We hope you find the conference to be enjoyable and educational. We are excited this year to present the Walter E. 'Howdy' Howard Lifetime Achievement Award for Excellence in Vertebrate Pest Management to honor those that have made significant contributions towards the advancement of the field.

We have worked over the years to keep this educational Conference the best of its kind. We welcome your comments (good and bad) concerning it. We are always looking for potential Conference speakers and would appreciate your suggestions for possible speakers or program topics. Contact the chairperson, Niamh Quinn, (E-mail: vpc@ucanr.edu).

CONFERENCE PROCEEDINGS

Individual papers from past Vertebrate Pest Conference *Proceedings*, Volume 1 (1962) through Volume 30 (2022), are available open-access and can be downloaded from the following website: https://escholarship.org/uc/vertebrate_pest_conference.

ATTENTION TO PRESENTERS

Check in with your session chairperson at the beginning of your session and introduce yourself. Please be careful with your time and respectful of the session chairperson and your fellow speakers. Speakers will have 25 minutes to be introduced, present their talks, and field questions. Session chairpersons will keep speakers on time to ensure people attending concurrent sessions can hear papers presented at their published times.

Loading Presentations: A VPC representative or volunteer will be available to load your presentation in preparation for your session. Please bring your presentation loaded on portable storage device (e.g. thumb-drive) to facilitate this process. We will transfer your presentation to our computer and return your storage device to you. Please arrive early at the beginning of your session or find the session chair at the breaks to upload your presentation.

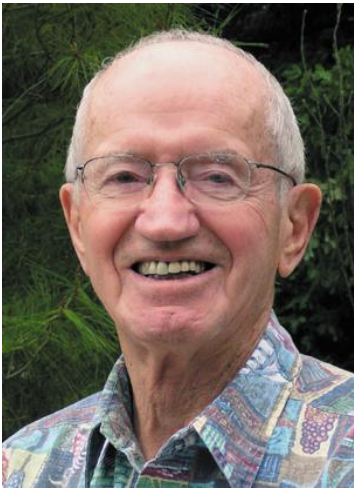
SPEAKERS' BREAKFAST

There will be a breakfast for speakers on Wednesday morning from 6:30 to 8:30 in the Ferrantes Bay View room. This breakfast is only for speakers and poster presenters

**Walter E. 'Howdy' Howard Lifetime Achievement Award
for Excellence in Vertebrate Pest Management**

The Vertebrate Pest Council is pleased to announce the presentation of the Walter E. "Howdy" Howard Lifetime Achievement Award. This award has been established to acknowledge the tremendous lifetime contributions of individuals in the Vertebrate Pest Management profession.

Walter E. 'Howdy' Howard



The Walter E. "Howdy" Howard Lifetime Achievement Award is named after a true pioneer and pillar in the vertebrate pest control profession. Born in 1917, Howdy's love for biology began as a young child. He graduated from U.C. Berkeley, served three years during WWII, primarily focusing on disease and parasite control, and completed his M.S. and Ph.D. at the University of Michigan. He joined the faculty at U.C. Davis in 1947 as professor of Wildlife Ecology. During his lifelong tenure at Davis, he developed the field of vertebrate ecology including vertebrate pest control, making UC Davis a premier international research and teaching institute in this field. His research focused on rodents impacting agriculture and public health, predators especially coyotes, and the politics of dealing with wildlife-human conflicts. He was committed to making state and federal agencies good stewards of wildlife populations and their habitats, and that the political structure ensures wildlife populations and humans coexist. Howdy is especially known for his perspective on the balance of nature and his direct challenge of the arguments posed by groups who are opposed to controlling wildlife populations. Howdy's impact on our profession and personal legacy live on today through the 44 Ph.D. and M.S. students he advised and

mentored at U.C. Davis and the countless professionals influenced by his personal interactions and writing. Howdy passed away in 2018 at the age of 101. It is with great honor that we name this award after Howdy.

Dr. Gary Witmer

Dr. Gary Witmer has been a nationally recognized authority in vertebrate pest management for decades. Gary's scholastic career began at the University of Michigan where he received a B.S. in Biology (1973) and an MS in Biology (1974). He also received a MS in Wildlife Ecology (1976) from Purdue University.

Gary has been professionally involved with wildlife for 45 years. His career started as a wildlife biologist with the Washington Department of Wildlife. From there, he completed a PhD on habitat use of Roosevelt elk at Oregon State University. From 1984-1988, Gary was responsible for conducting national-level environmental impact assessments as a terrestrial ecologist with Argonne National Laboratory at the University of Chicago. During this time, Gary also served as an Assistant Professor at Penn State University (1988-1991) where he mentored many students.



Gary began working for USDA in 1991 as a Field Station leader while serving as affiliate faculty at Washington State University, Pullman. In 1997 until retirement in 2020, he served as a Supervisory Research Wildlife Biologist and Project Leader at the National Wildlife Research Center in Fort Collins, Colorado. In the final 20 years of his career, Gary's focus has been on invasive and native rodent research. Gary's impact on the wildlife management world is evident from the numerous awards, recognitions and nominations from USDA, The Wildlife Society, New Zealand Landcare, and the Society of Military Engineers. Gary's publication record is immense with over 200 scientific papers published, in addition to a staggering 39 publications in the *Proceedings of the Vertebrate Pest Conference*. We are excited to recognize Gary's distinguished contributions to this profession and wish him well in his retirement.

The Vertebrate Pest Conference thanks these sponsors of our mission

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Platinum Sponsors



Conference At-A-Glance: Tentative Schedule

Monday, March 11

Optional Field Trip
8:00 AM – 4:30 PM

Sponsored by VM Products

Tuesday, March 12

Opening Plenary Session
9:00 AM – 12:00 PM

Lunch (*on your own*)

Posters and Commercial Exhibits open – 1:15 PM

<i>Symposium:</i> Pest and Beneficial Bird Management 1:20 PM – 5:00 PM	<i>Symposium:</i> New Frontiers in Managing Wild Pigs 1:20 PM – 5:00 PM
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5:30 PM No-Host Welcoming Social

Sponsored by The National Wild Pig Task Force

Wednesday, March 13

Speaker's Breakfast 6:30-8:30 AM

Ferrantes Bay View Ballroom

<i>Symposium:</i> Commensal Rodents 8:10 AM – 12:00 PM	<i>Symposium:</i> New Frontiers in Managing Wild Pigs 8:10 AM – 12:00 PM
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Lunch (*on your own*)

<i>Symposium:</i> Commensal Rodents 1:20 PM – 5:00 PM	<i>Concurrent Session:</i> Vertebrate Toxicants 1:20 PM – 4:35 PM
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1:30 PM -5:00 PM National Wild Pig Task Force Meeting

Ferrantes Bay View Ballroom

6:30 PM: Hors d'oeuvres, Poster Session, and Vendors' Forum

Sponsored by the Vertebrate Pest Council

Thursday, March 14

<i>Symposium:</i> Predator Management 8:10 AM – 12:00 AM	<i>Concurrent Session:</i> Rodent Management 8:10 AM – 12:00 AM
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Lunch (*on your own*)

<i>Concurrent Session:</i> General Session 1:20 PM – 3:55 PM	<i>Concurrent Session:</i> Rodent Management 1:20 PM – 3:55 PM
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CONTINUING EDUCATION

Attendees seeking Continuing Education credit must sign in and out at the event registration desk. All credits are approximations and are dependent upon your attendance.

California Department of Pesticide Regulation*:

Day	Topic	Other H:M	Laws and Regulations
1	Field Trip	1:15	0
2	Birds	4:00	0
2	Pigs Day 1	4:00	0
3	Pigs Day 2	4:00	0
3	Commensal Rodents	8:00	0
3	Vertebrate Toxicants	3:12.5	0:42.5
4	General Rodents	8:00	0
4	Predators	3:30	0
4	General Session	4:00	0

California Department of Public Health*:

Date	Category	Hours	Approval No.
Mar-12	A	1.25	25-00103
Mar-12	D	0.5	25-00103
Mar-13	A	1.75	25-00104
Mar-13	D	2.5	25-00104
Mar-14	A	0.5	25-00105
Apr-14	D	1.5	25-00105

*Applied for hours

CONFERENCE FIELD TRIP (Optional)

The Conference begins with an optional full-day field trip on Monday, March 11. The field trip departs from the Monterey Marriott at 8:00 AM. The field trip will include a tour of the Monterey area, including stops at an agricultural site, world-famous 17 mile drive, a scenic golf course in the hills of Carmel-By-The-Sea, and the beach. We'll be learning about rodent research related to food safety, birds in agricultural fields, protecting endangered plovers through predator management, sea otters, and more. A lunch will be provided, sponsored by VM Products. Buses will return to the hotel by approximately 4:30 PM.

Those who have pre-registered for the field trip should gather at the front of the hotel by 7:45am and be prepared to board the chartered bus in front of the hotel before 8:00 AM on Monday morning, March 11. Layered clothing and rain gear are recommended.

Tuesday, March 12 (AM)

PLENARY

- 9:00 **Conference Welcome and Overview**
Niamh Quinn, Vertebrate Pest Conference Chair
- 9:20 **Keynote Address “History, Management, and Future of Invasive Wild Pigs”**
James Beasley, Warnell School of Forestry and Natural Resources, University of Georgia, Aiken, SC
- 10:05 **Lifetime Achievement Award**
Niamh Quinn, Vertebrate Pest Council
- 10:25 Break**
- 10:45 **Five years of progress: A summary of the current capabilities for drone-based delivery of rodenticide for rodent eradication projects**
David Will, Island Conservation, Santa Cruz, CA
- 11:10 **Eight reasons for investing in research on wildlife fertility control**
Giovanna Massei, Botstiber Institute for Wildlife Fertility Control, Media, PA
- 11:35 **Evaluation of bloodmeals from mosquitos to detect and identify invasive or nuisance vertebrates**
Samantha M. Wisely, Dept. of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL
- 12:00 Session Close**

Tuesday, March 12 (PM)

SYMPOSIUM: PEST AND BENEFICIAL BIRD MANAGEMENT

- 1:20 **Session Welcome: Breanna Martinico, Human Wildlife Interactions Advisor, UC Cooperative Extension - Napa, Lake, and Solano Counties, Session Chair**
- 1:25 **Body mass regulation and starvation tolerance of the large-billed crow (*Corvus macrorhynchos*): Implications for crow population management**
Masaki Shirai, Central Research Institute of Electric Power Industry, Abiko, Japan
- 1:50 **Rodent response to barn owls is affected by vegetation in Napa Valley: Implications for vineyard management**
Katherine Larson, Cal Poly Humboldt State University, Arcata, CA
- 2:15 **Moving towards a holistic assessment of the food-safety risks imposed by wild birds**
Austin R. Spence, University of California, Davis, CA
- 2:40 **Assessment of birdstrike likelihood to refine bird strike risk models**
Travis L. DeVault, University of Georgia, Savannah River Ecology Laboratory, Aiken, SC
- 3:05 Break**
- 3:20 **Effect of flashing LED lights on the foraging behavior of wild-caught large-billed crows**
Masaki Shirai, Central Research Institute of Electric Power Industry, Abiko, Japan

- 3:45 **The recovery of the Aleutian cackling goose: From great success to dreaded pest**
Jeff Stackhouse, University of California Cooperative Extension, Eureka, CA
- 4:10 **Crop and pasture losses from over-wintering geese in the Sacramento Valley, California**
Breanna Martinico, University of California, Agriculture and Natural Resources, Napa, CA
- 4:35 **Influence of varietal and local habitat on winegrape damage in Napa Valley, California**
Matthew Johnson, Cal Poly Humboldt, Eureka, CA
- 5:00 **Session Close**

Tuesday, March 12 (PM)
SYMPOSIUM: NEW FRONTIERS IN MANAGING WILD PIGS

- 1:20 **Session Welcome: John M. Tomeček, Associate Professor and Extension Wildlife Specialist, Texas A&M University, Session Chair**
- 1:25 **The Trilateral Committee for Wildlife and Ecosystem Conservation and Management's ad hoc Feral Swine/Wild Pig Working Group**
David L. Bergman, USDA APHIS Wildlife Services, Phoenix, AZ
- 1:50 **Quantifying patterns and rates of wild pig translocation within the contiguous United States**
Timothy Smyser, USDA National Wildlife Research Center, Fort Collins, CO
- 2:15 **Data-based decision making is essential for effective feral pig management in Australia**
Daniel Lewer, Hunter Land Management, Maitland, Australia
- 2:40 **An update on the economics of wild pig damage in the US**
Stephanie A Shwiff, USDA National Wildlife Research Center, Fort Collins, CO
- 3:05 **Break**
- 3:20 **Texas WS Farm Bill response, 2019-2023**
David Pipkin, USDA-APHIS-WS, Hondo, TX
- 3:45 **Squeal on pigs!**
Jeanine Neskey, USDA/APHIS/WS/National Feral Swine Damage Management Program., Fort Collins, CO
- 4:10 **Rethinking our approach to wild pig control data and field tasks**
Rod Pinkston, Hog Control Academy™, Forston, GA
- 4:35 **Federal collaboration through feral swine eradication: A success story for enhanced biodiversity**
David L. Bergman, USDA APHIS Wildlife Services, Phoenix, AZ
- 5:00 **Session Close**

Wednesday, March 13 (AM)
SYMPOSIUM: COMMENSAL RODENTS

- 8:10 **Session Welcome:** Niamh Quinn, University of California Cooperative Extension, Session Chair
- 8:15 **Fertility control for rodents: new oral contraceptives**
Steven R. Belmain, University of Greenwich, Chatham Maritime, United Kingdom
- 8:40 **Investigating anticoagulant rodenticide resistance in California by screening for genetic mutations in roof rats**
Katherine Horak, USDA National Wildlife Research Center, Fort Collins, CO
- 9:05 **Real-time monitoring of contraceptive pellet consumption to achieve rat/mouse rodent control**
Loretta P Mayer, Wisdom Good Works, Flagstaff, AZ
- 9:30 **Behavior and activity of commensal roof rats around bait stations and tracking tunnels in southern California: Implications to improve management**
Miles Bosarge, California State University, Fullerton, CA
- 9:55 **Break**
- 10:10 **Development of best management practices to manage rats, protect public health, and reduce rodenticide**
Niamh Quinn, University of California Cooperative Extension, Irvine, CA
- 10:35 **Controlling house mouse infestations in apartment buildings**
Changlu Wang, Rutgers University, New Brunswick, NJ
- 11:00 **Genetic tools and ecological context for commensal rodent management: Urban population connectivity and island gene drives**
Matthew Combs, USDA National Wildlife Research Center, Fort Collins, CO
- 11:35 **Towards sustainable rodent control: New horizons in toxic and antifertility control**
B K Babbar, Punjab Agricultural University, India
- 12:00 **Session Close**

Wednesday, March 13 (AM)
SYMPOSIUM: NEW FRONTIERS IN MANAGING WILD PIGS

- 8:10 **Session Welcome:** John M. Tomeček, Associate Professor and Extension Wildlife Specialist, Texas A&M University, Session Chair
- 8:15 **National disease surveillance of feral swine by USDA Wildlife Services**
Gregory A. Franckowiak, USDA/APHIS/WS/National Feral Swine Damage Management Program., Fort Collins, CO
- 8:40 **Size and composition as a proxy for identification of wild pig sounders**
Sebastian Gomez-Maldonado, Auburn University, Auburn, AL
- 9:05 **ASF surveillance in the United States by USDA Wildlife Services**
James Grinolds USDA/APHIS/WS/National Feral Swine Damage Management Program., Fort Collins, CO
- 9:30 **Wild turkeys select against areas with greater densities of wild pigs**
Travis E. Stoakley, Auburn University, Auburn, AL
- 9:55 **Break**

- 10:10 **Wild pig behavioral response to aerial gunning in southwest Georgia, USA**
Justine L. Smith, University of Georgia & The Jones Center at Ichauway, Newton, GA
- 10:35 **Wild pigs in wild places: Controlling pigs in the federally designated Sipsey Wilderness Area**
Rollins Jolly, US Forest Service, Chattahoochee-Oconee NF, Chatsworth, GA
- 11:00 **Spatiotemporal partitioning of two invasive ungulates in Guam**
Kelly Koriakin, USDA National Wildlife Research Center, Fort Collins, CO
- 11:35 **Evaluating a warfarin grain bait formulation to control wild pigs (*Sus scrofa*) under variable field conditions in North Texas**
David M. Poche, Genesis Laboratories, Inc. Wellington, CO
- 12:00 **Session Close**

Wednesday, March 13 (PM)
SYMPOSIUM: COMMENSAL RODENTS

- 1:20 **Session Welcome: Niamh Quinn, University of California Cooperative Extension, Session Chair**
- 1:25 **Increasing rat numbers in cities linked to climate warming**
Jonathan Richardson, University of Richmond, Richmond, VA
- 1:50 **The untold history of the rodent bait station**
Christopher M. Kelty, University of California, Los Angeles, CA
- 2:15 **A shift towards coexistence: humane treatment of mice (*Mus musculus*), Norway rats (*Rattus norvegicus*) and black rats (*Rattus rattus*)**
Ciska De Ruyver, Ghent University, Ghent, Belgium
- 2:40 **Efficacy of Rat Ice™ as a treatment method for Norway Rats as part of an integrated rodent management plan for a homeless encampment in New Orleans, LA: A case study**
Rachel Denny, City of New Orleans Mosquito, Termite, and Rodent Control Board, LA
- 3:05 **Break**
- 3:20 **Sewer baiting in Alameda County and its relationship with Norway Rat activity**
Michelle Meas, Alameda County Vector Control Services District, Alameda, CA
- 3:45 **Observational analysis of rodent interactions with tamper-proof bait boxes using trail cameras in New Orleans, LA**
McKenna Devlin, City of New Orleans Mosquito, Termite, and Rodent Control Board, LA
- 4:10 **The demographic and evolutionary consequences of fertility reduction in rats: How pesticides and sterilants act like sexual selection**
Stephen. M. Shuster, Northern Arizona University, Flagstaff, AZ
- 4:35 **Norway rats and their associated ectoparasites trapped from homeless encampments in Oakland, California, and the implications for public health**
Adena Why, Alameda County Vector Control Services District, Alameda, CA
- 5:00 **Session Close**

Wednesday, March 13 (PM)
CONCURRENT SESSION: VERTEBRATE TOXICANTS

- 1:20 **Session Welcome: Mike Mooney, Alameda County Department of Environmental Health, Session Chair**
- 1:25 **Formulation of second-generation anticoagulant rodenticides with reduced risk to non-target scavenging and predatory birds**
Barnett A. Rattner, U.S. Geological Survey, Eastern Ecological Science Center, Laurel, MD
- 1:50 **New regulatory toxicology advances to support the registration of norbormide**
Charles Eason, Centre for Wildlife Management & Conservation, Lincoln University, New Zealand
- 2:15 **Exposure of the boreal lynx (*Lynx lynx*) to anticoagulant rodenticides in France – analysis of the SAGIR network data**
Philippe Berny, Vetagro Sup - Toxicology, Marcy, France
- 2:40 **Risk assessment for invasive brown treesnake control via acetaminophen baiting in residential areas of Guam**
Caylin McCormick, USDA National Wildlife Research Center, Fort Collins, CO
- 3:05 **Break**
- 3:20 **A regulatory update on rodenticides for California applicators**
Edmund Duarte, Alameda County Department of Agriculture/Weights and Measures, Hayward, CA
- 3:45 **Coyote rodenticide exposure in Los Angeles: The impact of the California Ecosystems Protection Act of 2020**
Sarah Helman, University of California, Los Angeles, CA
- 4:10 **Impact of the regulatory changes on rodenticide uses in France on poisoning incidents in animals**
Philippe Berny, Vetagro Sup - Toxicology, Marcy, France
- 4:35 **Session Close**

Thursday, March 14 (AM)
SYMPOSIUM: PREDATOR MANAGEMENT

- 8:10 **Session Welcome:** Carolyn Whitesell, University of California Cooperative Extension, Session Chair
- 8:15 **Mainland eradication of the invasive raccoon dog (*Nyctereutes procyonoides*) and the evolution of a national task force for invasive alien species**
Per-Arne Åhlen, Swedish Association for Hunting and Wildlife Management, Ånaset, Sweden
- 8:40 **Exploring the patrolling patterns of livestock guardian dogs: A GPS-based study on Texas ranches**
Bill Costanzo, Texas A&M AgriLife Extension, Washington, TX
- 9:05 **A landscape look at non-lethal predation management**
Michael Bodenchuk, USDA-Wildlife Services, Hondo, TX
- 9:30 **Mitigating ranching-wildlife conflict with science and community engagement**
Tracy Schohr, University of California Cooperative Extension, Alturas, CA
- 9:55 **Break**
- 10:10 **Space and habitat use of coyotes (*Canis latrans*) in suburban southern California**
Carolyn Day, UC Agriculture and Natural Resources; California State University, Fullerton, CA
- 10:35 **Diets of free-roaming cats across gradients of urbanization in southern California**
Saatvika Deshpande, California State University, Fullerton, CA
- 11:00 **Tracking seasonal behaviors of mesocarnivores in Alameda County**
Stephanie Kurniawan, Alameda County Vector Control Services District, Alameda, CA
- 11:35 **Reporting and tracking encounters and conflict with bobcats**
Alexander Heeren, California Department of Fish and Wildlife, Rancho Cordova, CA
- 12:00 **Session Close**

Thursday, March 14 (AM)
CONCURRENT SESSION: RODENT MANAGEMENT

- 8:10 **Session Welcome:** Edmund Duarte, Alameda County Department of Agriculture, Session Chair
- 8:15 **Efficacy of BurrowRx® fumigation for control of Richardson's (*Uroditellus richardsonii*) and Columbian ground squirrels (*Uroditellus columbianus*) in Montana: Two pilot studies.**
Stephen M. Vantassel, Montana Department of Agriculture, Lewistown, MT
- 8:40 **Can bait boxes help control voles in Oregon seed production systems?**
Christy Tanner, Oregon State University, Tangent, OR
- 9:05 **Rodent demographics matter for residue profiles of plant protection products**
Jens Jacob, Julius Kühn-Institute, Münster, Germany
- 9:30 **Does the addition of trapping to a rodenticide baiting program prove efficacious and cost effective in roof rat management programs in citrus orchards?**
Roger Baldwin, University of California, Davis, CA

9:55 Break

10:10 Canine- assistance to increase vole-trapping efficiency and effectiveness

Dana Sanchez, Oregon State University, Corvallis, OR

10:35 Efficacy of GonaCon fertility control against prairie dogs and potential for uses on other rodent species

Aaron Shiels, USDA National Wildlife Research Center, Fort Collins, CO

11:00 Eradication and post-eradication monitoring of black rats (*Rattus rattus*) in Dry Tortugas National Park

Alex Nicely, USDA APHIS Wildlife Services, Titusville, FL

11:35 Rodent-proofing for poison-free rodent control

Rebecca Dmytryk, Humane Wildlife Control Inc., Moss Landing, CA

12:00 Session Close

Thursday, March 14 (PM)
CONCURRENT SESSION: GENERAL SESSION

1:20 Session Welcome: Dirk Van Vuren, University of California, Davis, Session Chair

1:25 Assessing educator needs for resources associated with integrated vertebrate pest management

Stephen M. Vantassel, Montana Department of Agriculture, Lewistown, MT

1:50 The potential of the Apple Inc., AirTag™ as monitoring devices for tracking animals

George R Gallagher, Cal Poly San Luis Obispo, CA

2:15 Automated surveillance of invasive mammals: A trial of the Sentinel camera trap monitoring system with satellite transmission and drone remote upload capabilities on Kaho'olawe Island Reserve

Sam Kelly, Conservation X Labs, Washington DC

2:40 Efficacy of self-resetting traps for humane killing of invasive brown treesnakes

Shane R. Siers, USDA National Wildlife Research Center, Barrigada, Guam

3:05 Predator-free New Zealand 2050 – techniques for improving ground-based control and monitoring of the brushtail possum

James Ross, Lincoln University, Lincoln, New Zealand

3:30 10 years of wolf-livestock interactions and cooperative extension work in northern California

Laura Snell, University of California Cooperative Extension, Alturas, CA

3:55 Session Close

Thursday, March 14 (PM)
CONCURRENT SESSION: RODENT MANAGEMENT

1:20 Session Welcome: Mike Mooney, Alameda County Department of Environmental Health, Session Chair

1:25 Bubonic plague disease ecology in urban-wildland interfaces in Orange County, California

Laura Krueger, Orange County Mosquito and Vector Control District, Garden Grove, CA

1:50 Do the tracks track? Evaluating the effectiveness of baited-ink plates for rat monitoring in a montane rainforest

Kathryn Temple, Auburn University, Auburn, AL

- 2:15 **Rodent eradication lessons learned from Midway Atoll mouse eradication attempt in 2023**
Jared Underwood, U.S Fish and Wildlife Service, Honolulu, HI
- 2:40 **Factors contributing to recent house mouse eradication failures on islands: An initial assessment following a workshop in New Zealand**
Keith Springer, BirdLife South Africa, The Pines Beach, New Zealand
- 3:05 **Utilizing small, user-friendly, surveillance-oriented thermal drone systems to detect rodents and provide operational critical understandings to eradication projects—in near real time**
Austin Hall, Island Conservation, Hilo, HI
- 3:30 **Mating structure and multiple paternity in house mice with implications for management**
Aaron Shiels, USDA National Wildlife Research Center, Fort Collins, CO
- 3:55 **Session Close**

POSTER SESSION
Wednesday, March 13 (6:30-8:00 PM)
Location: San Carlos Ballroom Foyer
Session Chair: Nicki Frey, Utah State University

American kestrels in agricultural landscapes of the Lower Mississippi Alluvial Valley: Nest box occupancy, reproductive success, and pest control services

Ty Sharrow, Arkansas State University, Jonesboro, AR

Evaluation of food preference in wild-caught large-billed crows under captive feeding conditions: A pilot study

Momoyo Fujioka, Nagaoka University of Technology, Nagaoka, Japan

Diets of commensal roof rats (*Rattus rattus*) in southern California

Gabriela Guzman, Department of Biological Science, CSUF & UCANR, Cooperative Extension, Irvine, CA

The formidable opossum

Elio Di Giuseppe, Alameda County Vector Control, Alameda, CA

An overview of Alameda County Vector Control Services District programs and equipment used to support the programs

David West, Alameda County Vector Control, Alameda, CA

Proper exclusion techniques in rodent abatement

Michael Walls, Alameda County Vector Control

Pocket gophers (*Thomomys spp.*): Nuisance pest, or vector?

James Bohn, Alameda County Vector Control, Alameda, CA

Small but mite-y: An often overlooked aspect of rodent control

Wade Lee, Alameda County Vector Control, Alameda, CA

Influences on barn owl detections during hunting operations

Katherine Douglas, Hallux Ecosystem Restoration, Lihue, HI

Comparison of methods of controlling pocket gophers in Utah

Mark Nelson, Utah State University Extension, Beaver, UT

Knowledge and impacts of feral pig (*Sus scrofa*) in Mexico

Valeria Maria Alanis Gallardo, Universidad Nacional Autonoma de Mexico, Mexico City, Mexico

Response of mountain lions to hazing: Does exposure to dogs result in displacement?

Dirk H. Van Vuren, University of California, Davis, CA

American beaver habitat suitability strongly tied to lotic waters using both nuisance reports and iNaturalist crowdsourced sightings

Abrielle Mecray, University of Richmond, Richmond, VA

Vkorc1 mutations in *Rattus norvegicus*

Anna Voit, University of Richmond, Richmond, VA

Feral swine and pathogens: Mosquitoes are adding a new twist to a tale as old as time

Carson Torhorst, Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL

Diet of American kestrels in agroecosystems: Insights for IPM

Mary Badger, University of California, Davis, CA

Mitigating heat in barn owl nest boxes may strengthen Integrated Pest Management programs in hot climates

Emily Phillips, University of California, Davis, CA

Techniques to protect high-value trees from beaver damage

Elizabeth Cohen, Utah State University Extension, Coalville, UT

New research supports the growing emphasis on non-lethal beaver damage management

Stacie Robinson, USDA WS National Wildlife Research Center, Fort Collins, CO

Commercial Exhibits (Tuesday-Thursday)

VM Products

Michael Hovis
mhovis@vmproducts.com
Art Guzman
Modern Methods Sales & Marketing
Guzzer60@gmail.com
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PigBrig

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RCO International

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Skyhawk

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www.trapmate.ai

PIGBAITTA

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Botstiber Institute for Wildlife Fertility Control

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Motomco

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Wildlife Dominion

Jack Robertson
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<https://wildlifedominion.com/about-us/>

R&M Exterminators

Kyle Cordill
kyle@rmexterminators.com
<https://www.rmexterminators.com/>

Wildlife Control Supplies

<https://www.wildlifecontrolsupplies.com/>
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31st VERTEBRATE PEST CONFERENCE

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Plan to attend the
32nd Vertebrate Pest Conference
March 2-5, 2026

San Diego Marriott
San Diego, California

Notes:

