

July 5, 2016

Honorable Members of the Personnel and Animal Welfare Committee
Los Angeles City Council
Los Angeles City Hall
200 North April Street
Los Angeles, CA 90012

Re: Council File #16-0585, "California Department of Fish and Game/Coyote Sightings"

Gentlemen:

First, I want to thank you for the opportunity to address the Committee at its June 29 meeting. Though the time available for individual speakers was understandably brief, I hope, in concert with the public comments I submitted and distributed to you at the meeting, I succeeded in articulating my concerns over the draft coyote management plan that has been submitted by the Department of Animal Services ("Department").

An issue I had hoped to address in somewhat more detail goes to the credibility of the plan. Specifically, it appears that the Department has failed to consult three experts whose work on coyote-related issues in Southern California is well-known and widely referenced.

I am attaching to this letter the *curricula vitae* of the three experts to whom I refer: Professor/Professor Emeritus Rex Baker, Cal State Polytechnic University, Pomona, a specialist in wildlife/human conflict management; Robert M. Timm, who for 27 years served as Director and Wildlife Specialist at the University of California's Hopland Research and Extension Center; and Niamh Quinn, PhD, who is Area Vertebrate Pest Advisor at the University of California's Cooperative Extension, South Coast Research and Extension Center in Irvine. Dr. Quinn recently gave a presentation at the 27th Vertebrate Pest Conference in Newport Beach on the subject of citizen-provided coyote reports.

The Department is plainly aware of the work of these experts and of their ready availability to assist them. The Department is also doubtlessly aware that one or more of these individuals may not subscribe to every recommendation the Department has made, or has failed to make.

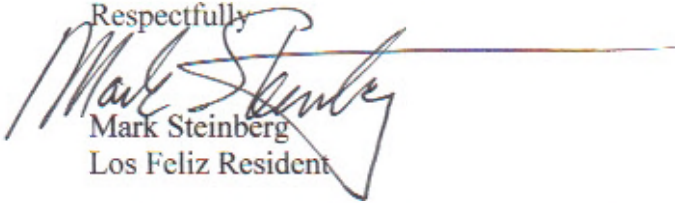
I respectfully suggest that diversity of opinion is not something to avoid in framing and recommending a course of action on this important issue. Rather, the Department should solicit a spectrum of opinion, specify the individuals with whom it consults, and explain its decisions to accept or reject the views of those individuals. To do otherwise would be to deny this Committee the information required to evaluate what the Department presents.

I strongly urge the Committee to direct the Department to submit the draft coyote management plan for review and comment by the experts to whom I have referred. Alternatively the Committee may wish to contact these individuals directly.

I hope the information I have provided proves helpful to the Committee in deciding how best to deal with the challenges presented by habituated coyotes in Los Angeles.

My regards and thanks to you all for your service to our community.

Respectfully

A handwritten signature in black ink, appearing to read "Mark Steinberg", is written over a horizontal line. The signature is stylized and cursive. Below the signature, the name and title are printed in a standard font.

Mark Steinberg
Los Feliz Resident

cc: Councilman Joe Buscaino, 15th District

VERTEBRATE PEST MANAGEMENT TECHNOLOGY

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REX O. BAKER

VERTEBRATE ECOLOGIST/PROFESSOR EMERITUS

VITA

Birth Place: San Diego, California, USA

Education:

- B.S. 1961, California State Polytechnic University, Pomona (Agricultural Biology-Pest Management)
- M.S. 1983 Agriculture, (Vertebrate Ecology emphasis) California State Polytechnic University/ UC Davis
- Other Post Graduate Work – Public Administration, San Diego State University

Professional Experience:

1976 - 6/2003 Professor/Professor Emeritus, Agricultural Biology and Pest Management Cal State Polytechnic University, Pomona. Specializing in Wildlife /Human Conflict Management, Vertebrate Pest Management, Government Regulations, and Advanced Pest Management Techniques.

1977-2004 Principle Investigator – Cal Poly Foundation, Cal Poly University, Pomona. . Behavior studies of urban and agricultural vertebrate pests and other wildlife in field, and controlled environments. Wildlife / Human Conflict Resolution, Rodenticide Product development and field efficacy trial design and implementation was provided for private and governmental organizations

1976 – Present Self employed, Vertebrate Pest Management Technology (a division of ROMAB Ent., Inc.), Corona, California. Consultant and lecturer to Agricultural and Structural Pest Control Operators, Landscapers, Ranchers and Governmental Agencies throughout the United States, regarding wildlife damage evaluation, identification and management program development. Monitoring of Vertebrate I.P.M. program efficiency in food warehouses & processing plants, industrial, residential; and farming operations have also been provided. Evaluation, design and supervision of programs to mitigate public safety/wildlife conflicts. Expert Witness regarding subjects listed above.

1980 – 1982 Staff Research Associate – Vertebrate Pest Management Wildlife and Fisheries Biology, U.C. Davis. (Part Time), Supervise state-wide project monitoring rodent damage to crops & evaluation of Integrated Pest Management Programs(IPM) for Vertebrates Pests.

1962 – 1976 Deputy Agricultural Commissioner, Biologist - County of San Diego, California USA, Management and Staff Advisor to Agricultural Commissioner. Advisor re: Pesticide Enforcement, Predator & Rodent Control and other Wildlife Damage Management issues. Also general Agricultural Pest Management Advisory; Environmental Impact Report preparation and review regarding pesticide use, vertebrate control and repellent methods.

Honors and Professional Memberships and Licenses:

- Cal Poly Pomona College of Agriculture Graduate of the Year 2001
- Vertebrate Pest Council of California
- Gamma Sigma Delta National Agricultural Honorary Society
- Alpha Zeta National Agricultural Honorary Fraternity
- Society of Vector Ecologists
- State of California Agricultural Commissioners License
- State of California Agricultural Biologist Licenses
- Licensed California Pest Control Advisor
- Certified Pesticide Applicator
- The Wildlife Society and Member of The Wildlife Damage Management Working Groups
- Certified by California Dept. of Fish and Game in “Wildlife Handling and Restraint”

Consulting & Advisory Interests:

Behavior of rodents and other wildlife as it relates to public health and safety, property damage and slope stability. Development and field testing of habitat and behavior modification strategies, exclusion, rodenticide and repellent agents, and other management techniques for vertebrate damage management
Integrated Pest Management consultation in Urban and Agricultural Wildlife Damage Management settings. Specializing in damage avoidance through habitat and behavior modification and population reduction when necessary. Expert witness for legal cases re: Conflicts between Animals and Man.

Professional Services Provided:

- Consultant to private and governmental vertebrate pest and wildlife management organizations regarding program development, problem solving, quality assurance, pesticide safety, and employee training
- Design and implementation of more than 20 predator and other wildlife mitigation projects for City Park Departments, State Wetland Restoration programs, Animal Regulation Agencies, other governmental agencies including airports, growers and home owner associations.
- Former Member of Orange County Vector Control, Solid Waste Project, Advisory Board.
- Member of California Director of Pesticide Regulation Pest Control Advisory Committee 1977-1999. Chairman 1979-82.
- Former Member County of San Diego Citizen’s Advisory Board to County Board of Supervisors, Environmental Review Committee.

- Chair, Continuing Education Committee, Vertebrate Pest Control Conference 3/2000-3/2014.
- Member of Californian Department of Agriculture Plant Pest Science/Technology and Advisory Committee 1982-1996.
- Member and former chair of the USDA Western Research Coordinating Committee #95 RE: Vertebrate Pests of Agriculture, Forestry and Public Lands 1984- 2010.
- Program Co-Chair, 16th Vertebrate Pest Control Conference 3/94 Santa Clara, Ca.
- Chair Elect 17th Vertebrate Pest Control Conference
- Chair of the 18th Vertebrate Pest Council 3/96-3/98
- Vertebrate Pest Management and Pesticide Safety Seminars and Workshop Presentations – More than 100 Presentations have been given to professionals working in the Animal Damage Management, Pesticide Safety, Vector Ecology, Pest Control and other related fields in numerous states and several foreign countries over the past 30+ years.

Sample of Publications

Timm, R. M. and R. O. Baker. 2011. Rodent Control in Layer Houses. Proc. Midwest Poultry Federation Annual Convention . St. Paul, Mn. 3/2011. 17 pgs.

Baker, Rex O. 2007. A Review of Successful Urban Coyote Management Programs Implemented to Prevent or Reduce Attacks on Humans and Pets in Southern Calif. Wildlife Damage Management Conference. Corpus Christi, Texas. April, 2007.

Timm, R. M. and R. O. Baker. 2007. A History of Urban Coyote Problems. Wildlife Damage Management Conference, Corpus Christi, Texas. April, 2007.

Timm, R. M., C. C. Coolahan, R. O. Baker, and S. F. Beckerman. 2007. Coyotes. Univ. Calif. Division Agric. And Nat. Resources, Pest Notes Publication 74135. 7 pp.

Timm, R.M., R. O. Baker, J. R. Bennett, and C. C. Coolahan. 2005. Coyote attacks on humans: an emerging problem in suburbia. Poster Presentation. Abstracts, 12th Annual Conference of The Wildlife Society, Madison, WI., p. 178

Timm, Robert M., Baker, Rex O., Bennett, Joe R. and Coolahan, Craig C. 2004. Coyote Attacks: An Increasing Suburban Problem. 69th. North American Wildlife and Natural Resources Conference, Spokane, WA. March 16-20, 2004.

Baker, Rex O. 2003. Field Efficacy Trial for Treatment of Pocket Gophers (*Thomomys* sp.) Using Fumitoxin^R Tablets. Pestcon Systems, Inc. and Degesch America, Inc. 34 pages.

Baker, Rex O. 2003 Pocket Gopher Control Using 55% Aluminum Phosphide Tablets. USDA Western Research Co-ordinating Committee #95. Reno, NV.

Baker, Rex O., Krieger, Robert. 2002. Phosphine Exposure to Applicators and Bystanders from Rodent (pocket gophers and ground squirrels) Burrow Treatment with Aluminum Phosphide. Proc. 20th Vertebrate Pest Conference, UC Davis, Ca. March 2002.

Baker, Rex O. 1981-2004. EPA Field Efficacy Trials for Pocket Gopher and Ground Squirrel Control- more than 10 different products have been tested for various private companies & agencies for California or US EPA registration.

Baker, Rex O. 1981-2002. EPA Field Efficacy Trials for Commensal Rats and House Mouse Control- more than 15 different products have been tested for various private companies & agencies for California or US EPA registration.

Baker, Rex O., Timm, Robert. 1998. Management of Conflict Between Urban Coyotes and Humans in Southern California. Proc. 18th Vertebrate Pest Conference, UC Davis, Ca. March, 1998. 13 pages.

Baker, Rex O., Crabb, A.C. 1998. Proceedings 18th Vertebrate Pest Conference, New Port Beach, Ca. Published at UC. Davis, Ca. March 1998

Baker, Rex O. 1996. Ground Squirrels as Agricultural and Urban Landscape Pests. IPM Vertebrate Pest Seminar, Southern California Edison/CSPUP. Tulare, California December 17, 1996. 6 pages.

Baker, Rex O. 1996. Pocket Gophers as Agricultural and Urban Landscape Pests. IPM Vertebrate Pest Seminar, Southern California Edison/CSPUP. Tulare, California December 17, 1996. 8 pages.

Baker, Rex O. 1996. Meadow Mice Integrated Pest Management. IPM Vertebrate Pest Seminar, Southern California Edison/CSPUP. Tulare, California December 17, 1996. 3 pages.

Baker, Rex O., Lambert, G. 1996. Rodent Control on Poultry Facilities. Sonoma Video Productions, Santa Rosa, California. Pacific Egg and Poultry Association Sponsor.

Baker, Rex O. 1995. Rodent Prevention and Control in Poultry Facilities. California Egg Quality Assurance Plan. California Egg Industry, CA Dept. of Food and Agriculture, US Dept. of Agriculture, U.C. Cooperative Extension Service and US Food and Drug Administration Sponsored. May and June 1995, Riverside and Modesto, CA.

Baker, Rex O. 1996. Commensal Rodent and Bird Integrated Pest Management Program Development. IPM in Schools Seminar, Washington State Pest Control Assn. and EPA Sponsors. Seattle, WA, February 9, 1996.

- Baker, Rex O., Bodman, G.R., Timm R.M. 1994. Rodent-Proof Construction and Exclusion Methods. Prevention and Control of Wildlife Damage, University of Nebraska. (Editors Hygnstrom, S.E., Timm, R.M., & Larson, G.E.)
- Baker, Rex O. 1994. A New Look at Sanitation and Exclusion in Urban Animal Damage Management. 16th Vertebrate Pest Control Conference. March 1994. Santa Clara, CA. (Presented, not published)
- Baker, Rex O., Witmer, Gary W. 1994. The Protection of Research Personnel, Equipment and Data. Northwest Scientific Association, Society for Northwestern Vertebrate Biology Annual Conference. March 1994. Ellensburg, Washington.
- Baker, Rex O. 1993. The Need for Anticoagulants for Rabbit Control. USDA Field Rodent Management Symposium December 1993. Reno, Nevada.
- Baker, Rex O. 1993. Sociopolitical Aspects of Urban Wildlife Conflicts. Wildlife Handling and Restraint Workshop. California Department of Fish and Game, Wildlife Investigations Laboratory. May 1993 Holiday Inn, Rancho, CA.
- Baker, Rex O. 1992. Exposure of Persons to Phosphine Gas from Aluminum Phosphide Application to Rodent Burrows Proceedings 15th Vertebrate Pest Control Conference. (Editors J.E. Bonecco & R.E. Marsh), Pub U of C, Davis. 1992
- Baker, Rex O. 1991. Analysis and Management of Bird Problems at Food Handling Facilities. National Pest Control Association, January 1992. Holiday Inn, Pasadena, CA.
- Baker, Rex O. 1990. Native heteromyid rodents as pests of commercial jojoba. Proceedings of 14th Vertebrate Pest Control Conference, UC Davis. 1990
- Baker, Rex O., Marsh, Rex E. 1987 – Roof Rat Control – A Real Challenge. Pest Management. August 1987 Issue.
- Baker, Rex O. 1986. Commensal Rodents – Key Identification Characteristics and Biology Essential to Control, pp8-11 In: Workshop Manual – Urban Wildlife Problems. Twelfth Vertebrate Pest Conference. March 4-6, 1986 San Diego, CA 46 pages.
- Baker, Rex O. 1986. A Discussion of Commensal Rodenticides, pp 14-16. In: Workshop Manual – Urban Wildlife Problems. Twelfth Vertebrate Pest Conference. March 4-6, 1986 San Diego, CA 46 pages.
- Baker, Rex O., Oliver, Matt 1986. Pocket Gophers as Urban Landscape Pests, pp 26-31. In: Workshop Manual – Urban Wildlife Problems Twelfth Vertebrate Pest Conference. Marcy 4-6, 1986, San Diego, CA 46 pages.

Baker, Rex O. 1986. Ground Squirrels as Urban Landscape Pests, pp 32-36. In: Workshop Manual – Urban Wildlife Problems. Twelfth Vertebrate Pest Conference. March 4-6, 1986 San Diego, CA 46 pages.

Baker, Rex O. 1984. Biological Reasons for Integrated Commensal Rodent Control Programs on an Area Wide Basis. Essential Ingredients for Successful Rodent Control Programs. 1st National Rodent Control Seminar of Brazil, Sao Paulo, SP, Brazil.

Baker, Rex O. 1984. Commingling of Norway and Roof Rats with Native Rodents. Proc. Eleventh Vertebrate Pest Conference 11: 103-111. Sacramento, CA

Baker, Rex O., Marsh, Rex E. 1984. Workshop Manual, Fundamentals of Commensal Rodent Control. Eleventh Vertebrate Pest Conference, Sacramento, CA.

Baker, Rex O. 1984. Vertebrate Pest Management in the Landscape. Proc. 25th Turfgrass and Landscape Institute. Anaheim, CA.

More than thirty other publications and unpublished articles and reports on Vertebrate Pest Management and the efficacy of various management strategies, repellents, and bait formations, including Brodifacoum, Bromadiolone, Bromethalin, Chlorophacinone, Diphacinone, Difethiolone, Cholecalciferol, Oleandrin, Alpha Chlorolose, Strychnine Sulphate, Tribromethanol and Zinc Phosphide have been completed over the last 25 years. Pests tested included commensal rodents, birds, meadow mice, ground squirrels, pocket gophers, Lagomorphs and various other animals.

ROBERT M. TIMM

Hopland Research & Extension Center

University of California

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Research and Extension Interests

Prevention and control of conflicts between wildlife and human activities; wildlife-agriculture interactions; behavior and control of rodents; behavior and management of coyotes.

Education

Ph.D. Ecology (emphasis in wildlife damage management), University of California - Davis, December 1977

M.S. Ecology, University of California - Davis, June 1973

B.S. Biology, *magna cum laude*, University of Redlands, California, May 1971

Experience

2014 – present

Extension Wildlife Specialist *emeritus*

1987 – 2014

Director and Extension Wildlife Specialist, Hopland Research and Extension Center, University of California

1978 – 1987

Extension Vertebrate Pest Specialist and Assistant / Associate Professor, Dept. of Forestry, Fisheries & Wildlife, University of Nebraska-Lincoln

1977 – 1978

Staff Research Associate, Dept. of Wildlife & Fisheries Biology, UC Davis

Professional Organizations and Activities

The Wildlife Society: Past Board Member and Past Chair, Wildlife Damage Management Working Group; Certified Wildlife Biologist - 1981

Vertebrate Pest Council: Chairperson (1994-96, 2010-12); Managing Editor, VPC Proceedings, 2001- present

Vertebrate Pest Control Research Advisory Committee, California Dept. of Food & Agriculture: Member (representing UC), 2000 - present

National Animal Damage Control Association: newsletter editor, 1990 - 2000

American Society of Mammalogists, past member

Gamma Sigma Delta, member

Sigma Xi, past member

Honors, Awards, and Foreign Experience (*selected list*)

Sabbatical Leave, Dept. of Ecology, Lincoln University, Canterbury, New Zealand, February 2009 – January 2010.

Consultant on field rodent control to Armenia and Azerbaijan, at invitation of USDA and the U.S. Ambassador to Armenia, April 20 - May 1, 2002.

Invited Speaker (4 presentations) Burrowing Rodent Damage Control Workshop, Alberta Agriculture, Food & Rural Development, Edmonton, Alberta, March 18-20, 1997.

Consultant on rodenticides and rodent control strategies, Liaoning Chemical Industry Research Institute, Dalian China, October 1995.

Keynote Speaker, 5th Eastern Wildlife Damage Control Conference, Ithaca, NY, Oct. 6-9, 1991.

Consultant, USDA Denver Wildlife Research Center/USAID, on extension and research efforts in rodent control, Bangladesh, November - December 1989.

Invited Participant, 2nd Symposium on Recent Advances in Rodent Control, Kuwait, February 1985.

“Outstanding Book” Award for editing *Prevention and Control of Wildlife Damage*, presented by Natural Resources Council of America, Washington D.C., 1983.

Recent Publications (selected list)

- Timm, R.M., and J.M. O'Brien (Editors). 2014. Proceedings, 26th Vertebrate Pest Conference. Publ. Univ. Calif. at Davis. 462 pp.
- Baldwin, R. A., T. P. Salmon, R. H. Schmidt, and R. M. Timm. 2014. Perceived damage and areas of needed research for wildlife pests of California agriculture. *Integrative Zoology* 2014(9):265-279. DOI: 10.1111/1749-4877.12067
- Baldwin, R.A., T.P. Salmon, R.H. Schmidt, and R.M. Timm. 2013. Wildlife pests of California agriculture: regional variability and subsequent impacts on management. *Crop Protection* 46:29-37.
- Timm, R.M. (Editor). 2012. Proceedings, 25th Vertebrate Pest Conference. Publ. Univ. Calif. at Davis. 380 pp.
- Timm, R.M. 2011. House Mouse (revised). Pest Notes, Univ. Calif. Division Agric. and Nat. Resources, Publication 7483. 5 pp.
- Timm, R.M., T. P. Salmon, and R. E. Marsh. 2011. Rats (revised). Pest Notes, Univ. Calif. Division Agric. and Nat. Resources, Publication 74106. 9 pp.
- Timm, R.M. 2011. Managing exotic mammals in New Zealand: An overview. *Proc. Wildl. Damage Management Conf.* 14:93-109.
- Timm, R.M., and K. A. Fagerstone (Editors). 2010. Proceedings, 24th Vertebrate Pest Conference. Publ. Univ. Calif. at Davis. 414 pp.
- Timm, R.M. (Editor). 2007. Urban Coyote Management. Wildlife Damage Management Working Group of The Wildlife Society. 144 pp.
- Schmidt, R. H., and R. M. Timm. 2007. Bad dogs: Why coyotes and other canids become unruly. Proceedings, Wildlife Damage Management Conference 12:287-302.
- Timm, R. M., and R. O. Baker. 2007. A history of urban coyote problems. Proceedings, Wildlife Damage Management Conference 12:272-286.
- Timm, R.M., C.C. Coolahan, R.O. Baker, and S.F. Beckerman. 2007. Coyotes. Pest Notes, Univ. Calif. Division Agric. and Nat. Resources, Publication 74135. 7 pp.
- Timm, R.M. and T.P. Salmon. 2005. Trends in wildlife damage management in North America. *Outlooks on Pest Management* 16(5):215-219.

Brief Biography

Robert M. Timm is a native of Southern California, where his senior honors project as a biology major at the University of Redlands involved surveying parasites in local populations of Norway rats.

During his graduate studies at the University of California at Davis, he worked under the direction of Dr. Walter E. Howard and Rex E Marsh, both of whom are highly regarded for their lifetimes of research in rodent control, rodenticides, and development of improved strategies for mitigating wildlife damage.

In his first academic position as Extension Vertebrate Pest Specialist at the University of Nebraska-Lincoln, he was project leader of the first USDA-funded Integrated Pest Management project that dealt with vertebrate pests, specifically Norway rats, house mice, pocket gophers, and prairie dogs in agricultural environments. During this time he compiled, edited, and published the 1983 edition of the reference book *Prevention and Control of Wildlife Damage*, the most-used reference in the field of wildlife damage management in North America, in which he compiled the section on Vertebrate Pesticides.

Since returning to California in 1987 to assume the position of Director of the Hopland R & E Center and Extension Wildlife Specialist, he has been a member of the Vertebrate Pest Council (chairperson 1994-96 and 2010-2012). He serves as the University of California's representative on the California Dept. of Food & Agriculture's Vertebrate Pest Control Research Advisory Committee, which evaluates research proposals regarding improved methods for controlling rodent pest damage in California, in support of a number of rodenticide labels held by CDFA. During 2009, he was on sabbatical leave at Lincoln University, Canterbury, New Zealand, where he cooperated with Professor Charles Eason and his colleagues at Connovation Ltd. on the development and registration of new bait materials and formulations to control introduced mammalian pests.

Address:
7601 Irvine Blvd., Irvine,
California, 92618

Mobile phone no: +1949-653-1813
Email Address: nmquinn@ucanr.edu
Date of Birth: 14th June 1983
Nationality: Irish

Expertise

My research primarily focuses on human-wildlife conflicts and wildlife management with particularly emphasis on carnivore and rodent species. In recent years, my research has focused on management of wildlife using both lethal and non-lethal methods, giving me an important insight into contrasting methods of dealing with human-wildlife conflicts.

I also focus on extension and outreach and have given and been involved in numerous workshops, training efforts, community initiatives and outreach (through publications) focusing on best management practices for wildlife in urban and agricultural habitats.

I have expertise in areas of integrated pest management, ecologically-based rodent management, rodent trapping, handling, necropsy and monitoring, pesticide application, large-scale field experiments and parasitic infection diagnostics (microscopic and molecular).

Education

Oct. 2005-Jan. 2010

PhD Studentship- Department of Zoology, School of Natural Sciences, National University of Ireland, Galway, Ireland.

Project title: The population dynamics of small mammals in the west of Ireland: Implications of hill sheep activity and habitat

The project involved extensive small mammal trapping to determine the population dynamics of wood mice and pygmy shrews on wet heath and blanket bog habitats in the west of Ireland. Many unknown aspects of the ecology of these small mammal species on these sub-optimal habitats were determined.

External Examiner: Dr Sara Churchfield, University of London.

Sept. 2001-June 2005

Bachelor of Science (Hons) Zoology (4 year degree)- Department of Zoology, School of Natural Sciences, National University of Ireland, Galway, Ireland.

Final year research dissertation title: The hair tube analysis and supplementary feeding of red squirrels (*Sciurus vulgaris*) in Portumna Forest Park, Co. Galway. This research was part of a red squirrel translocation programme.

Skills Summary

Effective Communicator

- Excellent writing skills including scientific report writing and journal articles
- Effective presenter; both verbally and written to scientific community and public audiences
- Ability to communicate effectively with students, interns, land owners, growers, agricultural workers, state agencies and private industry
- Dissemination of knowledge to farmers, industry, stakeholders and school groups to help promote technologies, improve production and sustainability concepts

Qualifications

- Proficient user of statistics programmes R, SPSS
- ArcGIS, completed two training courses (ArcGIS Basics and ArcGIG Applications)
- Excellent knowledge of Microsoft Word, Excel and PowerPoint
- Qualified Applicators Certificate- Dept. of Pesticide Regulation, California (2010)
- Personal Licence for scientific animal handling from British Home Office
- Full clean driver's license for 9 years with the ability to operate manual and automatic transmissions with off-road driving experience
- Basic first aid qualifications (including CPR)

Other skills

- Excellent organisation skills
- Project design, data collection, analyses and dissemination
- Project management of national and international projects
- Ability to work as part of dynamic teams or individually in extreme weather and challenging environments
- Capable of following instructions, working on own initiative and as part of dynamic teams
- Ability to manage groups
- Ability to develop and maintain networks in ecology and wildlife management (Europe, US, Australasia)

Research and Field Experience

November 2014-Present-Area Vertebrate Pest Advisor-University of California Cooperative Extension, South Coast Research and Extension Center, Irvine, CA, USA

I facilitate interactions and information exchange among campus based academics, CE advisors and community stakeholders. My focus is directed on the coordination of Cooperative Extension programming regarding human-wildlife conflicts, particularly within the residential and industrial areas within Southern California where significant human-wildlife conflicts are occurring, with concentration in Los Angeles, Orange, and San Diego Counties. Human-wildlife conflicts include increasingly critical issues such as negative impacts of wild or feral mammals and birds in agricultural production, food safety, public health and safety, forestry, and natural resource conservation.

June 2014- August 2014- Small Mammal and Herpetofauna Scientist-Operation Wallacea, Transylvania Expedition, Romania.

The project aims to quantify the relative abundance of mammals, amphibians and reptiles between years through repeated annual trapping and survey efforts. My role will be to lead and train large student (undergraduate and high school) groups to achieve these goals. It is also my responsibility to provide seminars for student groups on my areas of expertise (human-wildlife conflicts/IMP and EBRM).

May 2012-August 2013-Postdoc Fellow-International Rice Research Institute, Crop and Environmental Sciences Division, Metro Manila, Philippines.

I led projects on rodent and weed interactions in lowland rice agro-ecosystems in the Philippines and Indonesia. My duties included the selection of study sites, data collection (trapping, biomass assessment, etc.), project, team and data management. I was responsible for all data analysis and interpretation and manuscript production. I was responsible for the training of interns and assistant scientists as well as teaching rodent handling skills at workshops. I was invited to present findings at the 11th International Mammalogical Conference.

July 2011-May 2012-Research Technician- Institute of Integrative Biology, Faculty of Health and Life Sciences, University of Liverpool, United Kingdom.

I played a key role in supporting researchers in conducting field work, involving live trapping and data collection from wood mouse and bank vole populations. I undertook subsequent parasitological examination of wood mouse faeces, conducted and assisted in the molecular diagnostics of microparasite infection and maintained accurate databases.

May 2010-May 2011-Staff Research Associate II- Kearney Agriculture and Research Extension, University of California, U.S.A.

I led a project which aimed to develop an index to evaluate populations of roof rats (*Rattus rattus*) in almond orchards involving the trapping and handling of rats as well as the use of remote sensing cameras. I evaluated the efficacy of chlorophacinone and diphacinone baits in the control of roof rats in almond orchards and Belding's ground squirrels (*Spermophilus beldingi*) in alfalfa pivots. During efficacy trials for the effect of baits on ground squirrel control, visual count surveys and burrow counts were conducted. Burrow fumigants were also employed during the ground squirrel study. I have experience with radio telemetry.

Oct. 2005-Jan 2010-PhD Studentship- Department of Zoology, School of Natural Sciences, National University of Ireland, Galway, Ireland and Teagasc Research Centre, Athenry, Galway, Ireland.

During my PhD, I carried out small mammal trapping and handling of wood mice (*Apodemus sylvaticus*), pygmy shrews (*Sorex minutus*), bank voles (*Myodes glareolus*) and house mice (*Mus musculus*). Licences were successfully attained for capturing and killing of wild animals and for the attaching of a device to a small mammal. PIT tagging of wood mice was carried out. Skills for neck ringing of pygmy shrews were acquired. Dissection techniques were acquired on pygmy shrews. Important writing and statistical skills were developed over the course of this project. Sampling of available diet for small mammals was assessed (plant and invertebrate). The identification of habitats and plant communities were also necessary during this research.

Publications and Presentations

Publications (Published, submitted and in prep.)

Peer Reviewed and peer edited proceedings

- **Quinn, N.**, Baldwin, R.A., Dimson, M. 2016 "Ground squirrel best management practices. ANR Publication
- Baldwin, Roger A; Chapman, A; Kofron, C; Meinerz, R; Orloff, S; **Quinn, N.** (2015). "Refinement of a trapping method increases its utility for pocket gopher management." Crop Protection 77: 176-180.
- **Quinn, N;** Baldwin, R. A (2015). "Managing Roof Rats and Deer Mice in Nut and Fruit." ANR Publication 8513
- Baldwin, R. A; **Quinn, N.**, et al. (2014). "Effectiveness of rodenticides for managing invasive roof rats and native deer mice in orchards." Environmental Science and Pollution Research 21(9): 5795-5802.
- **Quinn, N.**, Htwe, N. M., Rachmawati Johnson, D & Singleton, G. 2014. Rodent Cycles and Outbreaks in Asia: biological curios and food security. Proceedings of the 26th Vertebrate Pest Conference, Hawaii, US.
- **Quinn, N.**, Davis, D. H., Engeman, R.M. & Baldwin, R. 2014. Efficacy of rodenticides for roof rat and deer mouse control in orchards. Proceedings of the 26th Vertebrate Pest Conference, Hawaii, US.
- **Quinn, N.**; Baldwin, R. A, et al. (2012). "Deer Mouse." Integrated Pest Management for Home Gardeners and Landscape Professionals Publication 74161(Pest Notes. University of California Agriculture and Natural Resources Statewide Integrated Pest Management Program)
- Baldwin, R. A; **Quinn, N.** (2012). The Applicability of Burrow Fumigants for Controlling Belding's Ground Squirrels in Alfalfa. Proceedings of the 25th Vertebrate Pest Conference, Monterey, California

Non-Peer Reviewed

- Baldwin, R. A; **Quinn, N.**, et al. (2015). Deer mice. Vertebrate Pest Control Handbook.R. Baldwin. California Department of Food and Agriculture, Sacramento, CA.: 149-156.
- Rios, Sonia; **Quinn, N.** "Pocket gopher and ground squirrel control: Management options for citrus and avocado groves." Tropics in Subtropics Newsletter 13(4).
- **Quinn, N.**; Rios, Sonia (2015). "Pocket gopher and ground squirrel control: Management options for citrus and avocado groves." CAPCA Adviser 18(3): 48-50.
- **Quinn, N.** (2015). "Tree or Ground Squirrels: What's the difference?" Retail Nursery and Garden Center IPM News 5(3)
- **Quinn, N.** (2015). "Tree Squirrels: Identification and Management." UC IPM Green Bulletin5(1)
- **Quinn, N.** (2014). "Controlling Rats and Mice." Retail Nursery and Garden Center IPM News5(1)

Proceedings, Presentations and Posters

- **Quinn, N.**, Fox, D., Hartman, J. (2016) An examination of citizen-provided coyote reports: temporal and spatial patterns and their implications for management of human-coyote conflicts. 27th Vertebrate Pest Conference, Newport Beach, US. *Oral presentation*
- Dimson, M., Baldwin, R.A., **Quinn, N.** User-friendly resource design: providing accessible ground squirrel extension for the web. 27th Vertebrate Pest Conference, Newport Beach, US. *Oral presentation*
- **Quinn, N.**, Htwe, N. M., Rachmawati Johnson, D & Singleton, G. 2014. Rodent Cycles and Outbreaks in Asia: biological curios and food security. 26th Vertebrate Pest Conference, Hawaii, US. *Oral presentation*
- **Quinn, N.**, Davis, D. H., Engeman, R.M. & Baldwin, R. 2014. Efficacy of rodenticides for roof rat and deer mouse control in orchards. 26th Vertebrate Pest Conference, Hawaii, US. *Poster presentation*
- **Quinn, N.**, Htwe, N. M., Rachmawati & Singleton, G. 2013. Rodent Cycles and Outbreaks in Asia: biological curios and food security. 11th International Mammal Congress, Queen's University Belfast. *Invited oral presentation*
- **Quinn, N.**, Davis, D. H., Engeman, R.M. & Baldwin, R. 2013. Efficacy of rodenticides for roof rat and deer mouse control in orchards. 11th International Mammal Congress. *Poster presentation*
- Singleton, G., **Quinn, N.**, Htwe, N. M., Rachmawati & Johnson, D. 2013. Multi-country experiment of rat and weed interactions in Asia: ecological studies assist our quest for increased future food security. Abstract No. 72: 9th European Vertebrate Pest Management Conference, Turku, Finland (September 22-27, 2013)
- Halová, D., Rafter, P., Stuart, P., **Quinn, N.**, Zintl, A., Mulcahy, G., Lawton, C., de Waal, T. Toxoplasma gondii in Ireland. 22nd world association for the advancement of veterinary parasitology conference. Calgary, Canada (9- 13 August).
- **Quinn, N.**, Walsh, M. & Lawton, C. (2008) The population dynamics of pygmy shrews (*Sorex minutus* L.) under three land use regimes. Proceedings of the Agricultural Research Forum, Tullamore, Co. Offaly, Ireland, pg 69. *Oral presentation*
- **Quinn, N.**, Walsh, M. & Lawton, C. (2007) The impact of hill sheep activity on the population dynamics of wood mice (*Apodemus sylvaticus*, L.). Proceedings of the Agricultural Research Forum 2007 (Awarded best student presentation/poster) Tullamore, Co. Offaly, Ireland, pg 104. *Oral and poster presentation*

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