

**Curriculum Vitae****Fenton R. Kay, Ph.D.**

4100 Cholla Road  
Las Cruces, NM 88011

505-571-7772 – Cellular

e-mail: [kayrat@comcast.net](mailto:kayrat@comcast.net)  
[fkay@nmsu.edu](mailto:fkay@nmsu.edu)  
[fenton.kay@du.edu](mailto:fenton.kay@du.edu)

**Education:**

- ! Post-Doctoral Trainee, University of Florida, Gainesville, 1974-1976
- ! Ph.D., Biology; New Mexico State University, Las Cruces, 1974.
- ! M.S., Zoology; University of Nevada, Las Vegas, 1969.
- ! B.S., Biology; University of Nevada, Las Vegas, 1967.
- ! Coursework in Computer Science, New Mexico State University, 1982.

**Professional Training**

- ! State of Arizona, Certified Public Manager I, March 1993.

**Certifications:**

- ! Certified Senior Ecologist, Ecological Society of America, 2005-2010.
- ! Certified Ecologist, Ecological Society of America, 2000-2005
- ! Spotted Owl Survey & Monitoring Certification, U.S. Forest Service, May 1993.

**Professional Overview:**

Dr. Kay retired from Zia Engineering & Environmental Consulting, LLC, in September 2011.

Dr. Kay is a teacher, wildlife ecologist, and field and laboratory researcher. He has over 30 years of teaching experience and in excess of 21 publications in professional journals. He has taught and continues to teach online wildlife, biology, and environmental science courses at Universities, Community Colleges, and small, private colleges. Dr. Kay is also a recently self-published novelist with two novels available at Amazon.com.

Dr. Kay has extensive experience teaching biology, wildlife, and environmental courses online. He currently teaches several courses in the Environmental Policy & Management program at the University of Denver and two online courses in the Fisheries, Wildlife & Conservation Ecology department at New Mexico State University.

Dr. Kay has experience with vegetation, nongame vertebrate, and invertebrate community and population sampling techniques and analysis. Dr. Kay has extensive experience in the development of database management systems, computer programming, and in the application of statistics in research design and analysis.

Dr. Kay was the Habitat Staff Biologist for Nevada Department of Wildlife for 6½ years, where he reviewed, analyzed, and prepared comments on numerous natural resource documents. He has extensive experience working with various federal resource management agencies and has developed position documents on federal grazing regulations. He supervised the Heritage Data Management System and the GIS program for the Arizona Game and Fish Department. Dr. Kay has management experience in the private sector as well as with a state agency.

**Professional History:**

- ▶ New Mexico State University, Dept. of Fishery, Wildlife, and Conservation Ecology, 2018 to Present, Affiliate Faculty, Online Instructor
- ▶ University College, University of Denver, Denver, CO, 2009 to Present, Adjunct Instructor/Online Environmental Policy Management and Bachelor's Completion Programs
- ▶ Stell Environmental, Inc., El Paso, TX, 2015 to 2015, P/T on-call Senior Biologist/Mentor
- ▶ Fenton R. Kay, PhD., Las Cruces, NM, 2012 to 2018, Independent Consultant
- ▶ American Intercontinental University, 2008, Online Instructor.
- ▶ Zia Engineering and Environmental Consultant, LLC, Las Cruces, NM, 2005 to 2011, Associate Scientist/NEPA Project Coordinator.
- ▶ Doña Ana Branch Community College, Las Cruces, NM, 2004 to 2005, Assistant Professor, Health Occupations
- ▶ El Paso Community College, El Paso, TX, 2000-2005, Research Associate, GEAR UP Program
- ▶ Kay Casa Enterprises, Las Cruces, NM, 2001 to 2012, Vice President & Ecologist
- ▶ SWCA, Inc. Environmental Consultants, Las Cruces & Albuquerque, NM, 1998-2000, Senior Biologist
- ▶ New Mexico State University, Las Cruces, NM, Dept. of Fishery & Wildlife Science, 1995-Present, Adjunct Associate Professor
- ▶ New Mexico State University, Las Cruces, NM, Jornada Experimental Range, 1996-1998, Science Specialist
- ▶ ECG, Inc., Vienna, VA, 1995-1996, Senior Biologist/Las Cruces Operations Manager
- ▶ The Proteus Corporation, Albuquerque, NM, 1993-1995, Senior Environmental Scientist/Project Manager
- ▶ West Coast University, Edwards AFB, CA, 1992, Instructor, Introduction to Environmental Science
- ▶ Arizona Game and Fish Department, Phoenix, AZ, 1992-1993, Supervisor, Natural Resource Databases
- ▶ Kayrat Services, Reno, NV & Tucson, AZ, 1990-1992, Principal/Ecologist
- ▶ Truckee Meadows Community College, Reno, NV, 1984-1989, Part-time Faculty, Biology
- ▶ Western Nevada Community College, Carson City, NV, 1988, Part-time Faculty, Biology
- ▶ University of Nevada, Reno, NV, Dept. of Range, Wildlife & Forestry, 1987-1988, Part-time Instructor
- ▶ Nevada Division of Wildlife, Reno, NV, 1984-1990, Habitat Staff Biologist
- ▶ OAO Corporation, White Sands Missile Range, NM, 1983-1984, Operations Manager
- ▶ OAO Corporation & Kentron International, White Sands Missile Range, NM, 1980-1983, Task Leader/Senior Subject Matter Specialist
- ▶ HDR, Sciences Division, Santa Barbara, CA, 1978-1979, Senior Ecologist
- ▶ Tall Timbers Research Station, Tallahassee, FL, 1977, Visiting Scientist

- ▶ California State University, Los Angeles, 1976-1978, Assistant Professor of Biology
- ▶ University of Florida, Gainesville, FL, 1974-1976, Post-Doctoral Research Associate
- ▶ New Mexico State University, Las Cruces, NM, 1970-1974, Graduate Research and Teaching Assistant
- ▶ Desert Research Institute, Las Vegas, NV, 1970, Research Assistant
- ▶ University of Nevada, Las Vegas, 1963-1969, Graduate Teaching Assistant, Undergraduate Research Assistant

### **Professional Experience Details:**

#### **Online Instructor, Affiliate Faculty, Dept. of Fishery, Wildlife, & Conservation Ecology, New Mexico State University, 2018 to Present.**

Teaches online courses in Principles of Wildlife Management and Wildlife Ecology at the undergraduate level.

#### **Online Instructor, University College, University of Denver, 2009 to Present**

Teaches online courses in NEPA, Endangered Species, Natural Resource Management, Systems Ecology, Introduction to Ecology, Recreation Use, and Environmental Ethics in the Master's program and Ecology & Ecosystems, Scientific Method, Sustainability Issues & Solutions, and Natural Resource Management in the Bachelor's Completion Program. Designed and developed online course in Ecosystems and Ecology for Bachelor's Completion Program; Re-designed online courses in Environmental Values and Ethics and Introduction to Ecology for the Environmental Policy & Management Program.

#### **P/T Senior Biologist/Mentor, Stell Environmental, Inc., 2015 to 2015**

Participated in biological field surveys/monitoring, met clients, developed proposals, mentored junior staff on an as-needed/consulting basis.

#### **Independent Consultant, Fenton R. Kay, Ph.D., 2012 to 2018**

Carried out biological surveys and prepared reports for NEPA and other environmental documentation; provides statistical analysis and consulting; reviews and edits various technical documents.

#### **Zia Engineering and Environmental Consultants, LLC, 2005 – 2011**

Senior Scientist and NEPA Project Coordinator for the corporation. Managed the Albuquerque, New Mexico office of Zia. The office had a staff of five archaeologists, biologists, and marketers. Responsible for oversight of project proposals and budgeting, and project implementation. Provided quality assurance and control for all project products. Products included cultural resource surveys and reports, biological surveys and reports, wetlands delineations and reports, 404 permitting, GIS mapping and analysis, and environmental (NEPA) documentation for projects. Provided oversight for assuring appropriate NEPA documentation and proper evaluation of project environmental and cultural impacts for the company as a whole. Retired September, 2011.

#### **American Intercontinental University, 2008**

Online Instructor. Taught General Biology online for one quarter. Pre-hire training in AIU's proprietary web-based course management system.

#### **Doña Ana Community College, 2004 – 2005**

Assistant Professor, Health Occupations Division. Taught classes (lecture and lab) in Anatomy and Physiology to pre-nursing students and classes (lecture and lab) in Human Biology to non-science

majors.

### **El Paso Community College, 2000 – 2005**

Research Associate for the GEAR UP Program. Responsible for development of surveys and data collection and analysis of student performance and activity, parental activity and attitudes, and teacher development and attitudes in four rural, largely Hispanic school districts in El Paso County, Texas. The program is following a cohort (the class of 2005) from 7<sup>th</sup> grade through graduation from high school. The goal of the program is to increase student performance in school, and entry into and success in college.

### **Kay Casa Enterprises, 2001 – 2005**

Proprietor/Ecologist for environmental consulting business ([www.kaycasa.com](http://www.kaycasa.com)). Carried out biological evaluations and T&E species surveys for clients in southern New Mexico including the City of Las Cruces, Doña Ana County and the State of New Mexico. Prepared environmental assessments and biological analyses for projects reviewed by the Bureau of Land Management and the U.S Fish and Wildlife Service. Provided statistical consulting to a Wildlife Conservation International jaguar population analysis study in Belize, Central America.

### **SWCA, Inc, Environmental Consultants, 1998 – 2000**

Senior Biologist carrying out National Environmental Policy Act (NEPA) mandated environmental studies for various clients. Projects include EA's for natural gas well pads and a casino project for the Jicarilla Apache Tribe. Experience doing T/E Species surveys, vegetation surveys and wetland delimitations along railroad and pipeline rights-of-way in Texas, New Mexico, Arizona, California, and Arkansas. Carried out biological surveys and jurisdictional waters delimitations for highway modifications in Las Cruces, Ruidoso and the Zuni Pueblo in New Mexico. Supervised a 900+ mile T&E species and jurisdictional waters survey along a natural gas pipeline between El Paso, Texas and the Colorado River.

### **New Mexico State University, Department of Fishery and Wildlife Sciences, 1995-2018**

Adjunct Associate Professor in the Fishery and Wildlife Sciences Department. Taught an advanced-undergraduate/graduate Special Topics course on use of GIS and remote sensing in wildlife management and a course entitled "Principles of Natural Resource Management". The latter course was presented in an online, distance education format for three semesters. Co-principal investigator on International Arid Lands Consortium (IALC) grant to study of the influence of the banner-tail kangaroo rat on shrub invasion of the Chihuahuan Desert grassland. Work with graduate students on thesis projects funded by the IALC grant. Review grant applications for the IALC.

### **New Mexico State University, Jornada Experimental Range, 1996-1998**

Science Specialist with long-term multiple stressor experiment being funded by U.S. Environmental Protection Agency. Study intends to examine the influence of intense seasonal livestock grazing and shrub removal on desert rangeland. Involved in all aspects of the study; vegetation analysis, small mammal and lizard studies, invertebrate sampling, etc. Designed and implemented study to assess grass utilization by the kangaroo rat, *Dipodomys ordii*. Supervised wildlife graduate student doing continuation of kangaroo rat grass utilization study. Co-edited special symposium issue of the Journal of Arid Environments.

### **ECG, Inc., 1995-1996**

Senior Biologist/Las Cruces Operations Manager. Established the Las Cruces office for ECG, Inc. Responsibilities included marketing, proposal preparation, and execution of environmental efforts

in the southwestern U.S. or other parts of the country as required. Interfaced with cooperators and clients and managed environmental and other contracts in the region. Developed increased corporate capability in GIS as a tool for use in environmental documentation. Participated in sensitive species surveys for NASA, White Sands Test Facility as a subcontractor to Physical Sciences Laboratory, NMSU.

#### **The Proteus Corporation, 1993-1995**

Senior Environmental Scientist/Program Manager. Responsible for developing and implementing Proteus' environmental program. Included marketing, project management, interpretation and implementation of state and federal environmental regulations, and coordinating projects with regulatory agencies, the public and the client. Among the projects managed was a military base Environmental Impact Statement and other NEPA documentation. Edited and wrote portions of the draft document. Actively involved in development of Proteus' capability to apply GIS technology to environmental analysis and compliance projects. Developed a database management system for Army client. Reviewed results of analytical/statistical computer software model for consistency and accuracy.

#### **Arizona Game & Fish Department, 1992-1993**

Supervisor, Natural Resource Databases. Directly supervised two wildlife and computer line supervisors and indirectly supervised eight others. Responsible for oversight and operation of the AG&F's Heritage Data Management System, a database of Threatened and Endangered species information, and Geographic Information System database, a program for development and analysis of map-based information on natural resources in Arizona. Oversight included data input/output and security. Negotiated contracts for use of services, interfaced with other resource management agencies (both Federal & State), planned future direction of program, including GIS/Heritage Database interface.

#### **West Coast University, 1992**

Temporary Instructor. Taught "Essentials of Environmental Science" at Edwards AFB, California. Class was part of upper division/graduate program toward a certificate and/or Masters degree in Environmental Science. Class was 48 clock hours of lecture.

#### **Kayrat Services, 1990-1992**

Independent consultant/contractor. Participated in endangered species studies and surveys in Arizona (desert tortoise) and California (desert tortoise, Stephan's kangaroo rat). Produced biological portion of NEPA-mandated environmental assessments for Bullhead City and Lake Havasu City, Arizona and a NEPA/CEQA (California Environmental Quality Act) biological report for a marina project near Needles, California. Provided US Fish and Wildlife Service (USFWS) mandated nest monitoring of a golden eagle nest on a Nevada gold mining property. Co-authored report on impact and mitigation of a housing development on a mule deer herd near Reno, Nevada. Carried out computer consulting and programming including database management system development for consultants, small businesses and state agencies. Databases included a mining company information database, a database for maintaining mining-related animal mortality information, and a system to allow detailed record keeping for endangered species in temporary captivity.

#### **Truckee Meadows Community College, Reno, NV, 1984-1989**

Part-time Faculty. Taught Man & Environment course (three lectures/week) and General Biology (two lectures & 1 lab/week) to science and non-science oriented students. Taught Anatomy and Physiology to nursing and other allied health science students during evening session. Class consisted of two lectures and a laboratory. Laboratory included use of human cadavers. Honored for five years of part-time service.

**Western Nevada Community College, 1988**

Part-time Faculty. Taught Man & Environment course for one semester (three lectures/week).

**University of Nevada, Reno; 1987-1988**

Temporary Instructor. Taught Habitat Management, a three-credit lecture and lab course. Presented wildlife habitat management as an exercise in applied ecology. Discussed uses of statistical tools in habitat management. Used personal computer statistical package in lab exercises. Taught a Special Topics course entitled Wildlife of Nevada at UNR. The course was a two credit, lecture course with one field trip. The course provided Range, Wildlife & Forestry and other students with an overview of the natural history of selected common wildlife in Nevada.

**Nevada Department of Wildlife, 1984-1990**

Habitat Staff Biologist. Had responsibility for Nevada Division of Wildlife's (NDOW) position and public/agency interaction on environmental/habitat issues. Coordinated development of NDOW's response and position on a wide variety of NEPA (National Environmental Policy Act) documents. Interacted with federal resource management agencies (primarily US Fish & Wildlife Service, Bureau of Land Management and US Forest Service) on statewide wildlife habitat related issues. Developed programs and procedures (operating policies) having to do with habitat-related issues. Reviewed Federal grazing regulations and prepared a position document for NDOW regarding grazing issues on Federally-managed rangelands. Interacted with state agencies and represented NDOW at legislative committee hearings. Played a major role in the assessment of impacts to wildlife of cyanide-leach gold mining operations in Nevada. Worked with mining industry to develop mitigation strategies for the impacts, and legislation and regulations to give NDOW the authority to implement and monitor the strategies. Those mitigation methods and regulations provided a model for Federal resource management agencies (particularly Bureau of Land Management) and other state wildlife agencies that deal with mining/wildlife issues. Designed and implemented a study of the economic value of wildlife to the state of Nevada. Study included development of mail-out economic survey instruments, statistical analysis of data, and dissemination of results. Developed database management system to handle and analyze economic data. Developed a database system for tracking ownership and management of lands owned and/or operated by NDOW in Nevada. Had a major role in the development of an NDOW-wide computerization plan.

**OAO Corporation, 1983-84**

Operations Manager. Managed all OAO operations at White Sands Missile Range (WSMR). Responsible for 35 to 50 regular employees and 15 high-level professional consultants on 15 tasks under a General Services Administration (GSA) technical services (software) contract. Performed system analyses as needed for design of tasks and preparation of proposals. Developed spreadsheets for preparation of proposals. Responsibilities included proposal preparation, personnel recruiting, development of operational and administrative procedures, and industrial security. Insured that all tasks and task deliverables were completed on schedule and within budget. Maintained liaison with government, military and industrial representatives at WSMR and in the local area.

**OAO Corporation, 1982-83**

Senior Subject Matter Specialist. Acted as Deputy Operations Manager that included personnel search and selection and task analysis and proposal preparation. Managed four independent data processing tasks. Had supervisory responsibility for up to 10 data processing professionals ranging from system analysts to computer operators. Instructed two employees in fundamentals of programming on a minicomputer. Trained two operators and a secretary in the use of a word processor on the microcomputer. Supervised the training and subsequent work of an operator on an interactive database system used in missile test firing. Designed, wrote, modified and maintained various database management and accounting programs on minicomputers and

microcomputers.

#### **Kentron International, 1980-1982**

Senior Subject Matter Specialist. Responsible for two software development and maintenance and computer operation tasks associated with missile test and evaluation. Supervised up to six employees, including computer aids, computer operators, apprentice programmers and senior subject matter specialist. Instructed personnel in the use of a word processing system on a microcomputer and instructed an employee in programming on two computers.

#### **Consulting Ecologists, Inc., 1981-1984**

Ecologist/Treasurer. Formed company and set-up corporation with three partners. Carried out analysis of specialized microcomputer software requirements for the academic/research market. Performed ecological and biological consulting and analysis including software support design associated with development of environmental studies. Managed a programmer on a graphics development project. Performed duties of corporate treasurer and actively marketed for consulting contracts for the corporation.

#### **HDR, Sciences Division, 1978-1979**

Senior Ecologist. Led the study and analysis design team for studies of terrestrial ecology for environmental impact studies under the National Environmental Policy Act (NEPA). Interacted with government, military and civilian natural resource planners. Carried out field studies. Utilized a minicomputer for analysis of environmental impacts on wildlife and vegetation. Wrote portions of draft Environmental Impact Statement. Contributed to the preliminary conceptual development and helped identify existing algorithms for a data analysis system for assessing the environmental impacts of a large project. Worked with satellite remote-sensed imagery.

#### **California State University, Los Angeles, 1976-1978**

Assistant Professor of Biology. Taught courses that included "General Ecology", "Urban Ecology", "Physiological Ecology" "Mammalogy", "Vertebrate Zoology", and "Man and the Biological Environment". Directed the Master's Degree programs of three students, one of whom subsequently earned a doctoral degree in Environmental Engineering from UCLA. Carried out independent research and published results in professional journals. Taught statistical applications as appropriate in various classes.

#### **Tall Timbers Research Station, 1977**

Visiting Scientist. Designed and implemented a study of the effects of controlled burning on the ecology of forest small mammal populations. Studied the thermal biology of ground-dwelling, wingless wasps (Velvet Ants) on the research station. Presented results of studies at national professional society meetings.

#### **Department of Physiology, University of Florida, 1974-1976**

National Institutes of Health (NIH) Postdoctoral Trainee. Designed and implemented three research projects in respiratory physiology. Presented research results at national professional meetings and published in a professional journal. Taught Anatomy and Physiology to nursing students. Assisted in respiratory physiology tutorials for medical students. Supervised two laboratory technicians.

#### **Department of Biology, New Mexico State University, 1970-1974**

Graduate Student. Obtained Ph.D. in Biology. Taught laboratories in General Biology and Introduction to Genetics. Field team leader for the study of small mammals and occasional acting site coordinator at the International Biological Programme (IBP) Jornada Validation Site (now Long

Term Ecological Research Site) on the Jornada Experimental Range near Las Cruces, New Mexico. Wrote computer code for portions of an ecosystem computer simulation model. Developed computer programs for reduction of ecological data and interactive programs for statistical analysis of data. Designed, coded and implemented a program for reduction of physiological data for Ph.D. dissertation. Used statistical techniques in design and analysis of dissertation research.

### **Desert Research Institute, 1970**

Research Assistant. Field team leader for water quality studies. Responsible for location of water sample sites and for collection of water samples. Carried out preliminary water quality analysis of samples. Assisted in pump-testing wells and other measuring and sampling duties, including installation of Parshall Flumes.

### **Department of Biological Sciences, University of Nevada, Las Vegas, 1963-1969**

Undergraduate and Graduate Student. Obtained Bachelor's and Master's degrees. Supervised up to two undergraduate field assistants. Taught labs in "General Biology", "General Zoology", "General Botany" and "Anatomy and Physiology". Taught "Introduction to Herpetology" which included both lecture and lab. Used statistical techniques in the analysis of thesis and other research data.

### **Professional Service**

1996-97 - Vice President, Society of Sigma Xi, NMSU Chapter.

### **Grant Awards and Honors**

Co-Principal Investigator, Research Grant from International Arid Lands Consortium  
Sigma Xi Grant-in-Aid-to-Research  
American Men and Women in Science  
Who's Who in the West and Southwest  
Who's Who in the West  
Who's Who of Emerging Leaders in America, 2nd Ed.  
Outstanding Centennial Alumnus, College of Arts and Sciences, New Mexico State University, 1988.  
Certificate of Appreciation-Five years of part-time teaching, Truckee Meadows Community College, Reno, NV, 1985-1990.  
Appreciation pin for seven years of teaching at the University of Denver, University College, Environmental Program Management program.

### **Professional Affiliations**

Ecological Society of America (Emeritus member)

### **Self-Published Novels**

Le Cochon Volant: The Flying Pig – A mystery novel placed in the Mojave Desert of California/Nevada. [Amazon.com/author/fentonkay](https://www.amazon.com/author/fentonkay)  
Chipmunk Jumped Over Him – A coming of age story for Young Adult readers based in Native American stories and traditions. [Amazon.com/author/fentonkay](https://www.amazon.com/author/fentonkay)

### **M.S. Thesis**

Habitat Preference, Response to Environment, and Activity Patterns of Lizards at Saratoga Springs, Death Valley National Monument, California.



### Doctoral Dissertation

The Influence of the Burrow Environment on Body Temperature, Oxygen Consumption and Water Loss of the Banner-tailed Kangaroo Rat, *Dipodomys spectabilis*.

### Post-Doctoral Research

Effects of chronic carbon monoxide exposure on aspects of the respiratory physiology of laboratory rats.

Comparison of the influence of carbon dioxide concentration on the respiration of three rodent species.

Effects of carbon dioxide on respiration of an armadillo.

### Ecosystem (Computer) Modeling

Contributor to the system simulation model of IBP, Desert Biome, Chihuahuan Des. Valid. Site (Ludwig, J.A. 1975. **Towards Achieving a Realistic Computer Simulation of a Desert Playa Ecosystem. Proc. 1975 Summer Computer Simulation Conference, San Francisco. pp. 961-972. AFIPS Press, Montvale, NJ.**)

### Affiliated Activities

Cooperator on Wildlife Conservation International jaguar tracking study in Belize, 2000

Lectured on biology at public schools and civic organizations in Las Vegas, NV, 1965-1967.

Member advisory committee on endangered species to Nevada Department of Wildlife, 1968.

Co-founder of Southern Nevada Herpetological Society.

Involved in nature photography.

### Presentations at Professional Meetings

1972 - Activity Patterns of *Callisaurus draconoides* at Saratoga Springs, Death Valley, California. Meeting of the Herpetologists' League, Albuquerque, NM.

1973 - The Jornada I.B.P. Site: Small Mammals. Southwestern Regional Meeting of AAAS, Tempe, AZ.

1974 - Responses of *Dipodomys spectabilis* to Elevated CO<sub>2</sub> Concentrations. Meeting of American Society of Mammalogists, Binghamton, NY.

1976 - Effects of Chronic Carbon Monoxide Exposure on 2,3-DPG of the Rat (Poster Presentation). Meeting of the Federation of American Societies of Experimental Biology, Anaheim, CA.

1977 - The Functional Role of 2,3-DPG in Mammals and its Possible Role in the Co-evolution of Predators and Prey. Southwestern Ecologists' Conference, James Reserve, CA.

1977 - Ventilatory and Metabolic Responses of an Armadillo (*Dasypus novemcinctus*) to Elevated CO<sub>2</sub> Concentrations. Meeting of American Society of Mammalogists, East Lansing, MI.

1979 - Effects of Prescribed Burning on Rodents of North Florida Forests (Poster Presentation). Meeting of American Society of Mammalogists, Corvallis, OR.

1985 - Preliminary Report on Economics of Bighorn Sheep Hunting. California Bighorn Workshop, Nevada Dept. of Wildlife, Reno, NV.

1985 - Progress Report on Economic Analysis of Bighorn Sheep Hunting. Meeting of the Desert Bighorn Council, Las Vegas, NV.

1989 - Migratory birds and cyanide laden ponds: The Nevada experience. Gold & Silver Recovery Innovations. Phase IV Workshop. Randol International Ltd. Sacramento, CA.

1990 - NDOW's Role: Past, Present, Future. Nevada Wildlife/Mining Workshop, Reno, NV.

1994 - Efficient Environmental Regulatory Compliance and Loss Control Through Integrated GIS and Decision Support Systems. The Mining Environmental Management Conference, Reno, NV.

1997 - Bioperturbation by desert small mammals. 7<sup>th</sup> International Theriological Conference,

- Acapulco, Mexico
1998. - Spatial analysis of two rodent species at the Jornada Experimental Range Multiple Stressor Experimental Site. 8<sup>th</sup> Annual Friends of the Jornada Symposium, Las Cruces, NM.

**Peer-Reviewed Publications**  
(Available at [www.Researchgate.com](http://www.Researchgate.com))

- Babero, B.B. and F.R. Kay. 1967. Parasites of horned toads (*Phrynosoma* spp.), with records from Nevada. *Journal of Parasitology* 53: 168-175.
- Kay, F.R. and W.G. Bradley. 1968. Occurrence and distribution of the eastern fence lizard (*Sceloporus undulatus*) in southern Nevada. *Herpetologica* 24: 72-76.
- Kay, F.R. 1969. An albino Pacific tree frog, *Hyla regilla*, from Death Valley, California. *Great Basin Naturalist* 29: 111.
- Kay, F.R., B.W. Miller and C.L. Miller. 1970. Food habits and reproduction of *Callisaurus draconoides* in Death Valley, California. *Herpetologica* 26: 431-436.
- Hoff, C.L. and F.R. Kay. 1970. Herbivorous feeding in the lizard *Uta stansburiana stejnegeri*. *Southwestern Naturalist* 15: 137-138.
- Kay, F.R. 1970. *Leptotyphlops humilis* in Death Valley, California. *Great Basin Naturalist* 30: 91-93.
- Kay, F.R. 1970. Environmental responses of active lizards at Saratoga Springs, Death Valley, California. *Great Basin Naturalist* 30: 146-165.
- Emmerson, F.H. and F.R. Kay. 1971. Agonistic behavior in some captive frogs (*Rana*) from Nevada. *Herpetological Review* 3: 39.
- Kay, F.R. 1972. Activity patterns of *Callisaurus draconoides* at Saratoga Springs, Death Valley, California. *Herpetologica* 28: 65-69.
- Kay, F.R. 1972. Small mammals. pp. 48-54 and pp. 127-131 in US/IBP Desert Biome Research Memorandum 72-4. Utah State Univ., Logan.
- Kay, F.R., C.O. McKinney and R.A. Anderson. 1973. Notes on the activity of two species of the genus *Cnemidophorus* (Sauria: Teiidae). *Herpetologica* 29: 105-107.
- McKinney, C.O., F.R. Kay and R.A. Anderson. 1973. A new all-female species of the genus *Cnemidophorus*. *Herpetologica* 29: 361-366.
- Whitford, W.G., R. Mishaga, J. Delson, S. Pimm and F. Kay. 1974. Physiological section for the animal submodel, general purpose model. pp. 129-134 in US/IBP Desert Biome Research Memorandum 74-64. Utah State Univ., Logan.
- Kay, F.R. 1975. Environmental physiology of the banner-tailed kangaroo rat. I. Influences of ambient temperature, humidity and carbon dioxide on body temperature. *Comparative Biochemistry & Physiology* 50A: 483-488.
- Kay, F.R. 1977. Environmental physiology of the banner-tailed kangaroo rat. II. Influences of the burrow environment on oxygen consumption and evaporative water loss. *Comparative Biochemistry & Physiology* 57A: 471-477.
- Kay, F.R. 1977. 2,3-diphosphoglycerate, blood oxygen dissociation and the biology of mammals. *Comparative Biochemistry & Physiology* 57A: 309-314.
- Kay, F.R. and W.G. Whitford. 1978. The burrow environment of the banner-tailed kangaroo rat, *Dipodomys spectabilis*, in south-central New Mexico. *American Midland Naturalist* 99: 270-279.
- Kay, F.R. 1979. Ventilatory and metabolic responses of an armadillo (*Dasypus novemcinctus*) to elevated carbon dioxide concentrations. *American Midland Naturalist* 102: 178-181.
- Kay, F.R., R.P. McQuivey, K. Raffiee and J.L. Dobra. 1985. An economic analysis of the 1984 Desert Bighorn Sheep hunt in Nevada. *Transactions of the Desert Bighorn Council* 1985: 8-12.
- Kay, F.R. 1988. Nevada Survey of the Economic Value of Big Game Hunting, 1984-1986. Nevada Dept. of Wildlife, Biological Bulletin No. 9.
- Kay, F.R. 1990. NDOW's Role: Past, Present, Future. pp. 18-22 in Proc. Nevada Wildlife/Mining Workshop. Nevada Mining Assoc./Nevada Dept. Wildlife, Reno, NV
- O'Farrell, M.J., W.A. Clark, F.H. Emmerson, S.M. Juarez, F.R. Kay, T.M. O'Farrell and T.Y. Goodlett. 1994. The use of new mesh live traps for small mammals: Are results from

- Sherman live traps deceptive? *Journal of Mammalogy* 75: 692-699.
- Kerley, G.I.H., W.G. Whitford and F.R. Kay. 1997 Mechanisms for keystone status: Graminivory rather than granivory? *Oecologia* 111:422-428.
- Kay, F.R. 1998. Influence of habitat vegetative condition on trap response of rodents associated with burrow mounds of *Dipodomys spectabilis* in a desert grassland. *Southwestern Naturalist* 43:269-273.
- Kay, F.R., H.M. Sobhy, and W.G. Whitford. 1999. Soil microarthropods as indicators of exposure to environmental stress in Chihuahuan Desert rangelands. *Biology and Fertility of Soils* 28:121-128.
- Andersen, M.A. and F.R. Kay. 1999. Habitats of banner-tail kangaroo rats and shrub invasion of Chihuahuan Desert grasslands. *Journal of Arid Environments*, 41:147-160.
- Whitford, W.G. and F.R. Kay. 1999. Biopedturbation by desert mammals: a review. *Journal of Arid Environments*, 41:203-230.
- Kerley, G.I.H., W.G. Whitford, and F.R. Kay. 2004. Effects of pocket gophers on desert soils and vegetation. *Journal of Arid Environments* 58: 154-165.
- V.L. Mathis, W.G. Whitford, F.R. Kay, and P.U. Alkon. 2006. Effects of grazing and shrub removal on small mammal populations in southern New Mexico, USA. *Journal of Arid Environments*, 66: 76-86.

#### **Research Not Published**

- Kay, F.R. and C.A.R. Kay. The influence of burn intervals on small mammal habitat and community diversity on northern Florida forest plots.
- Kay, C.A.R. and F.R. Kay. Observations on activity and thermal responses of the cow killer, *Dasymutilla occidentalis*, and other velvet ants (Hymenoptera: Mutillidae) in northern Florida.
- Kay, F.R. and C.A.R. Kay. Preliminary observations on oxygen consumption and water loss of the cow killer, *Dasymutilla occidentalis*, and other velvet ants (Hymenoptera: Mutillidae).
- Kay, F.R. Influence of trap type and trapping configuration on small mammals in a Chihuahuan Desert grassland.
- Kay, F.R. Responses of three rodent species to CO<sub>2</sub> concentration.

#### **Publications Edited**

1990. Proceedings of the Nevada Wildlife/Mining Workshop. (with Jo Gallaher).
1998. Special symposium issue, *Journal of Arid Environments*, Vol. 41, No. 3, February 1999 (with Walter G. Whitford).

#### **Technical Reports/Environmental Documents**

- Kay, F.R. 1987. Economic value of the 1986 mule deer hunt in Nevada. Limited distribution report prepared for USDI, Bur. Land Mgmt.
- Kay, F.R. 1990. Preliminary analysis of the economic value of the 1987 and 1989 upland game and waterfowl hunts in Nevada. Limited Distrib. Report prepared for Nevada Dept. of Wildlife, Reno, NV.
- Kay, F.R. 1990. Environmental Assessment for development of an artificial wetland. Prepared for Bureau of Land Management and the Sleeper Mine.
- Kay, F.R., A.P. Woodman and M.J. O'Farrell. 1991. Biological resources report for the City of Bullhead City water development plan environmental assessment. Prepared for Willdan Associates and the City of Bullhead City, Arizona.
- Kay, F.R. 1991. Preliminary Biological Report - Proposed Colorado River Sportsman Cove Housing Development and Marina Needles, California. Arciero & Sons, Inc. Developers. Prepared for MLA Environmental Consultants.
- Kay, F.R., A.P. Woodman and T.M. O'Farrell. 1991. Biological Report - Proposed Colorado River Sportsman Cove Housing Development and Marina - Tentative Tract #15276 - Needles, California. Arciero & Sons, Inc. Developers. Prepared for MLA Environmental Consultants.

- Kay, F.R. and A.P. Woodman. 1991. Biological resources report for The Lake Havasu City water development plan environmental assessment. Prepared for Willdan Associates and the City of Lake Havasu City, Arizona.
- Kay, F.R. and G.B. Herron. 1991. Final Report - Golden eagle nest monitoring - Wind Mountain Mine. Prepared for Wind Mountain Mining, Inc.
- Wright, F.E. and F.R. Kay. 1991. Mule deer recommendations and suggested mitigation/management package for the proposed Reno Golf and Country Club development on Peavine Mountain, Washoe County, Nevada. Prepared for Reno Golf and Country Club, Inc.
- Kay, F.R. 1993. Environmental Assessment for Maintenance and Repair, and Minor Construction of Real Property at Fort Huachuca. Prepared for Department of the Army, Fort Huachuca, Arizona by The Proteus Corporation.
- Cohen, T.M. and F.R. Kay. 1994. An economic analysis of a proposed land exchange between the Bureau of Land Management and the Independence Mining Company Inc. Prepared for the Independence Mining Company, Inc. by The Proteus Corporation.
- O'Farrell, M.J., and F.R. Kay. 1995. Sensitive species management plans for Fort Huachuca, Arizona. Prepared for USAIC and Ft. Huachuca by The Proteus Corporation.
- Kay, F.R., and others. 1995. Preliminary Draft Installation-wide Environmental Impact Statement for Ft. Huachuca, AZ. Prepared for USAIC and Ft. Huachuca by Proteus Corporation.
- Kay, F.R., and others. 1996. Survey plan for characterization of the subsurface underlying the National Aeronautics and Space Administration's Marshall Space Flight Center in Huntsville, Alabama. Vols. I and II. Prepared for NASA MSFC by ECG, Inc.
- Kay, F.R. 1997. Desert tortoise section, Supplemental Environmental Impact Statement, Ward Valley California Low-Level Nuclear Waste Repository. Prepared for Labat-Anderson, Inc.
- Kay, F.R. 1998. Endangered species report, City of Las Cruces landscaping project. Prepared for Terracon, Inc.
- Kay, F.R. 1998. Result of sensitive species survey near Santa Teresa, New Mexico. Prepared for Terracon, Inc.
- Kay, F.R. and M.J. O'Farrell. 1998. Results of an acoustic bat survey and nocturnal small mammal trapping survey near Santa Teresa, New Mexico. Prepared for Terracon, Inc.
- Kay, F.R. 1998. Report of results of a sensitive species survey along a railroad right-of-way near Oscuro, New Mexico. Prepared for Terracon, Inc.
- Kay, F.R. 1998. Biological Survey Report for Proposed Highway Widening in the City of Ruidoso, New Mexico. Prepared by SWCA, Inc. for Terracon, Inc.
- Kay, F.R. 1998-99. Five Environmental Assessments for Proposed New Natural Gas Wells and Associated Access Roads and Pipelines on the Jicarilla Apache Reservation. Prepared by SWCA, Inc. for Velarde Energy Services and the Bureau of Indian Affairs.
- Kay, F.R. 1999. Environmental Assessment for the Proposed Apache Nugget II Casino. Prepared by SWCA, Inc. for Velarde Energy Services and the Bureau of Indian Affairs.
- Kay, F.R. 1999. Results of a Survey for Mountain Plover along two segments of an El Paso Natural Gas Co. pipeline. Prepared by SWCA, Inc. for El Paso Natural Gas Co.
- Kay, F.R. 1999. Report on Results of Biological Surveys and Jurisdictional Waters Delineations along New Mexico Highway 53 near Zuni, New Mexico, on the Zuni Pueblo. Prepared by SWCA, Inc. for the New Mexico State Highway and Transportation Dept.
- Kay, F.R. 1999. Three reports on results of Threatened and Endangered Species surveys along the El Paso Natural Gas Pipeline Right-of-Way between El Paso, Texas, and Palmdale, California. Prepared by SWCA, Inc. for El Paso Natural Gas Co.
- Kay F.R. and C. Oakes. 1999-2000. Three reports on surveys for T/E species and jurisdictional waters associated with proposed cellular telephone tower sites. Prepared by SWCA, Inc., for RESCOM Environmental Corp.
- Kay, F.R. and C. Oakes. 2000. Three reports on results of T/E species and jurisdictional waters surveys associated with a project to expand US Highway 70 in Las Cruces, New Mexico. Prepared by SWCA, Inc. for Parsons Brinkerhoff Quade & Douglas, Inc.
- Kay, F.R. 2000. Two reports on T&E species surveys along a proposed materials haul road associated with a highway improvement project and at a proposed rural airport expansion project in southern New Mexico. Prepared by SWCA, Inc for Zia Engineering &

- Environmental Consultants, Inc.
- Kay, F.R. 2001. Biological Analysis for a Proposed Desalination Test Facility near Alamogordo, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2001 Results of a Biological Survey of Two Proposed Alternative Industrial Building Sites (10 and 20± Acre) in the City of Deming Industrial Park. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2001 Results of a Biological Survey of a 30 Acre Industrial Wastewater Pretreatment Facility Site in the City of Deming Industrial Park. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2002 Results of a Biological Survey for a Proposed Water Pipeline along US 180 between MP 163.1 and MP 164.2, Deming, Luna County, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2002 Results of a Biological Survey for a Proposed City of Las Cruces Rio Grande Corridor Project, Doña Ana County, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc. and the City of Las Cruces.
- Kay, F.R. 2002 Results of a Biological Survey for a Proposed La Clinica Familia Facility, Chaparral, Doña Ana and Otero Counties, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2002 Results of a Biological Survey for the Proposed Little Walnut Road Widening Project, Silver City, Grant County, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2002 A Biological Survey of the Proposed Columbus Port-of-Entry Expansion Project, Luna County, New Mexico. Prepared by Kay Casa Enterprises for Zia Engineering and Environmental Consultants, Inc.
- Kay, F.R. 2003. A Biological Survey and Environmental Assessment for a Proposed ROW Easement in Luna County, New Mexico. Prepared by Kay Casa Enterprises for Johnny's Septic Tank Co (submitted to BLM).
- Kay, F.R. 2004. A Biological Survey and Environmental Assessment for a Proposed Radio Tower on Redhouse Mountain, Doña Ana County, New Mexico. Prepared by Kay Casa Enterprises for Doña Ana County, New Mexico (submitted to BLM).
- Kay, F.R. 2004. A Biological Survey and Environmental Assessment of a Proposed Stormwater Runoff Project at the New Mexico Farm and Ranch Heritage Museum, Las Cruces, New Mexico. Prepared by Kay Casa Enterprises for the New Mexico Farm and Ranch Heritage Museum (submitted to BLM).
- Kay, F.R. 2005-2017. Multiple biological analyses, Environmental Assessments, and EIS sections as principal author, as Zia's NEPA Coordinator and as an independent consultant.