

Appendix 5.2C
Wildlife Biologist Resumes

Teri Baker

Wildlife Biologist
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Mobile: 702-349-7303

EDUCATION:

B.S. in Zoology, 2007, Michigan State University, East Lansing, MI
Internship, 2000 – 2001, WILDSIDE Rehabilitation & Education Center, Eaton Rapids, MI

PROFESSIONAL EXPERIENCE:

Southern Nevada Environmental, Inc. (May 2006 to June 2010)

- Assist Facility Manager with day to day operations at the Desert Tortoise Conservation Center (DTCC) including, but not limited to, feeding and housing tortoises; pen and facility maintenance; pen construction; trap and release of predatory animals.
- Assist Facility Manager with day to day operations at the Desert Tortoise Transfer and Holding Facility (DTTHF) including, but not limited to, desert tortoise health assessment; tagging, feeding, and housing tortoises; pen and facility maintenance; trap and release of predatory animals.
- Maintain Clark County Desert Tortoise Hotline services including, but not limited to, hotline call management, caller education and satisfaction, pick up and transport of desert tortoises to the Desert Tortoise Transfer and Holding Facility.
- Desert tortoise physical health assessment and care.
- Desert tortoise pick up, transport and housing.
- Desert tortoise pen/habitat construction and maintenance.
- DTCC and DTTHF facility and premise monitor and maintenance.
- DTCC and DTTHF daily housing-chore maintenance.
- Initiate and maintain all client contractual agreements
- Write detailed proposals and budgets for projects
- Coordinate and maintain excellent client services
- Coordinate field research and biological studies
- Review all biological and botanical reports
- Oversee scheduling and budgeting for projects
- Cacti and Yucca inventories

WILDSIDE Rehabilitation & Education Center (May 2000 to May 2001)

- Mammals, Raptors, Waterfowl health assessment and care.
- Wildlife capture, handling, transport, and housing.
- Wildlife housing-shifts from nursery or ICU to intermediate and to final releasing cage.
- Veterinary assistance with restraint and/or surgical procedures on wildlife.
- Medication distribution, wound cleaning, and dressing/bandage application on wildlife.
- Wildside Center incoming call assessment and Rescue dispatch.
- Wildside Center cage, facility and premise maintenance and repair.
- Wildside Center daily housing-chore maintenance.

Teri Baker (Cont.)

- Medical and Center supply ordering
- Wildlife handling & center protocol training of all new volunteers and interns.
- Supervision of volunteers and interns.
- Provided at home physical health assessment, care, caging, maintenance, and release of a variety of mammals for the (Kalamazoo Nature Center).
- Wildlife experience: deer (adult & fawn), fox, wood chuck, beaver, opossum, skunk, variety squirrels, rabbit, bat, variety of hawks, variety of owls, bald eagles and other raptors, variety of waterfowl and song birds, alligator, turtle, iguana and desert tortoise.

FACILITY/PROJECT EXPERIENCE:

- *Desert Tortoise Conservation Center and Clark County Desert Tortoise Transfer & Holding Facility.* Desert tortoise pick up, transport, health assessment, tag and care, pen/habitat construction and maintenance, perimeter fence check and maintenance; Clark County, NV.
- *Coyote Springs Investment Project* - Desert tortoise clearance; Coyote Springs, NV.
- *Mesquite Community Materials Pit* – Section 7 Consultation and Desert Tortoise clearance; Mesquite, NV.
- *Johnnie to Northwest Transmission Line* – Section 7 Consultation, Desert Tortoise Presence/Absence survey, Cacti and Yucca inventory and flagging; Indian Springs, NV.
- *NDOT Material Pits* – Fence Repair construction monitoring, Desert Tortoise Presence/Absence survey, Indian Springs, NV.
- *C1 Northeast Detention Basin* – Section 7 Consultation for tortoise behavior and fence installation feasibility; Henderson, NV.
- *Ivanpah Solar Energy Generating System* – Section 7 Consultation, Probabilistic Sampling surveys; San Bernardino, CA.
- *WILDSIDE Rehabilitation & Education Center* – Supervise clinic, volunteers, and wildlife, medicate, feed and care for wildlife, maintain, clean and prep supplies for clinic activities.

REFERENCES:

Michelle McDermott - Former DTCC Supervisor
Phone: 702-525-5957
Email: tortmrb@yahoo.com

Tracie Wheaton
Brightsource Energy
Environmental Compliance Manager
10161 Park Run Drive, Suite 150
Las Vegas, NV 89145
Phone (702) 768-7188
twheaton@brightsourceenergy.com

Alana Frost - Former SNEI Director of Project Management
Phone: 702-596-4353
Email: akfrost@embarqmail.com

Sage Clegg-Haman

3841 Lissa Dr.
Eureka ,CA. 95503

Phone: (831) 236-1864

Email: sageclegg@yahoo.com

EDUCATION

2001 Bachelor of Arts Degree in Environmental Studies with minor in Earth Sciences, University of California, Santa Cruz.

EMPLOYMENT

Biology/ Field Work

Kiva Biological Consulting, Desert Tortoise Field Biologist

Spring & Fall 2008, Spring 2009, spring 2010

Job Duties: Search for, radio track, handle, and process desert tortoises. Enter and proof data, manage small field crews, help with translocation, tracking, transmitter application and removal, x-ray procedures, and vegetation studies. Live and work in the field with 5 to 40 other people while taking care of self and coworkers in desert conditions.

Supervisor: Peter Woodman

Phone: (760) 861-3961 Email: kivabio@aol.com

Institute for Bird Populations, Willow Flycatcher Field Intern

May-July 2007

Job Duties: Conduct playback surveys for Willow Flycatchers at specific sites, frontcountry and backcountry, along the western slope of Yosemite National Park. Positively identify empidonax and other western species of interest, including rare birds and invasives, by sight and sound. Record, enter, and proof data. Be able to safely backpack to sites off-trail, use a map, compass, and GPS to record survey points. Work independently as well as with a small group of other interns to safely accomplish surveys.

Supervisor: Bob Wilkerson

Phone: 800-336-0513 Email:bwilkerson@birdpop.org

University of Montana Forestry Department, Field Technician/Tracker

Feb.-April 2003

Job Duties: Collect data for a study of how tree density affects fitness-related behavior of Snowshoe Hares. Used telemetry devices, set and checked hare traps, gathered data and lab material from trapped and tracked hares. Fitted, followed, and collected radio collars, identified tracks of hares and other animals found in the study area, used Forest Service radios, drove and repaired snowmobiles, and worked independently in harsh

weather conditions.

Supervisor: Karen Hodges

E-mail Contact: khodges@forestry.umt.edu, khodges@ouc.bc.ca

UC Santa Cruz Arboretum, Gardener

Sept.-June 1999-2001

Job Duties: Planting, weeding, plant propagation, and general care of gardens, often unsupervised and self-directed work. I was required to continue learning about botany and horticulture, and was expected to help train and supervise new Arboretum gardeners.

Experiential Education

Outward Bound: Course Director, Instructor, & Assistant Instructor, Montana Program, Sierra Program, Texas Program

May-August 2003- 2008

Sept.- April 2007, 2008

Feb-April 2009 (6.5 years, 9 seasons)

Job Duties: Lead 8-50 day expeditions for students from various populations and age ranges. Create an emotionally and physically safe culture, teach students to live in the backcountry, and pass on skills to build character, effective communication, judgment, and technical abilities. Safely lead and teach mountaineering, rock climbing, whitewater canoeing, and sea kayaking, depending on the course type. Plan educational curriculum, routes, menus, lessons, and pack food and equipment. Attend trainings and brief and debrief each trip in order to continue growth as an Instructor.

Promotion History: Intern 2003, promoted to Assistant Instructor 2003, promoted to Lead Instructor 2004, worked as a trainer in 2005 and 2008, worked as a Course Director beginning in 2006.

Current Contact: Penny Jeffers,

Phone: 218-365-5761 Email: pjeffers@outwardbound.org

University of California at Santa Cruz Wilderness Orientation Program & Recreation Program

Instructor, In-Town Food Coordinator, Field Food Coordinator, Recreation Leader

Aug-Sept 2001-2006, Aug 2009 (7 seasons)

Job duties: Prepare incoming UCSC students for school by providing time for introspection, building self-confidence, and establishing friendships and meaningful community. Facilitate activities to build self-confidence and comfort in the outdoors, such as leave-no-trace camping skills, leadership skills, nature awareness activities. Safely facilitate a core curriculum including a climbing day, a

peak ascent, and a 24-hour solo experience. Work with an Assistant Instructor and Volunteer to lead field groups of 12 students on two 10-day backpacking trips. Responsible for making final decisions regarding itinerary, and emergency situations, as well as mentoring co-leaders, overseeing the structure and curriculum of the courses.

In town food coordinator: Shopping and plan a daily menu for 15-17 staff members during training and other non-field days.

Field Food Coordinator: Order, shop, and supervise packing of backpacking food for 150 people for ten days.

Recreation Leader since 1999: lead classes and trips for UCSC students.

Supervisor/ Program Director: Matt Brower

Phone: (831) 459-2607 Email: mabrower@ucsc.edu

Classroom Education

Santa Cruz County Schools, Substitute Teacher

March-May 2004

Job Duties: Substituted for Santa Cruz City School teachers and aides for grades K-12, including special population classes. Supervise classes of 20-30 students independently, teaching a wide variety of lessons on any subject, and creatively engaged a broad range of students.

Missoula County Public Schools, Substitute Teacher

Oct.-May 2002 & 2003

CERTIFICATIONS:

American Heart Saver CPR Exp 05/11

Class B Drivers License, CA. Exp 11/18/12

Wilderness First Responder Certification Exp 03/12

Desert Tortoise Handling qualification since 2008

Richard Crawford

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Durango Co, 81302
(702) 672-5055
Rich_Crawford1@yahoo.com

Education

Bachelor of Science, Environmental Biology, Fort Lewis College
(FLC), Durango, CO, 2004
Minor: Chemistry

Purpose

I am an independent consulting biologist with experience conducting and leading botanical and wildlife surveys in California, Nevada, Arizona, Utah, Colorado, and Wyoming.

Project Experience

Kiva Biological Consulting/Tetra Tech, Inc

April-May 2009

Proposed Solar Power Generation Site
Jean, NV
Botanist

Assisted Dr. Marc Baker, Dr. Robert Johnson, and Glenn Rink to conduct rare plant surveys on approximately 12,000 acres near Jean, NV in creosote bush scrub community. Approved by BLM and USFWS in Las Vegas, NV to conduct rare plant surveys.

Westwind Bio/Eldorado Rock

October 2008- Feb 2009

Boulder City Bike Path
Boulder City, NV
Lead Biologist

Responsible for providing Environmental Compliance consultation for Eldorado Rock Co. on the construction of a 2.7 mile segment of the River Mountain loop Trail Project. Duties included hiring Biologists, conducting desert tortoise awareness training, and biological monitoring.

Kiva Biological/ Department of Defense

October 2006, March-May 2007, September-October 2007, February-May 2008, September-October 2008

Proposed addition of Manuver training Lands at Fort Irwin NTC
Fort Irwin, CA
Crew Lead/Biologist

The FT Irwin NTC Project is a seasonal long term project that

combines research with consulting to provide insight into the effects of large scale translocation efforts on desert tortoises. Duties include the attachment and removal of tracking devices, leading clearance surveys, translocation of desert tortoises, radio tracking desert tortoises, and data management.

BioResources inc./ El Paso Gas co.

July 2008-September 2008

High Plains Expansion Project

Denver, CO

Environmental Inspector

The High Plains Expansion is a project to build a natural gas Pipeline on the front range of Colorado from Cheyenne WY to Denver CO. I was responsible for conducting pre construction weed surveys, raptor nest surveys and general environmental compliance.

Kiva Biological/ U.S Fish and Wildlife Survey

May 2008-June 2008

Various Desert Tortoise surveys

Southern California

Biologist

Working with Kiva Biological, I participated in several different Tortoise efforts including Line Distance Sampling and Desert Tortoise Plot surveys on China Lake Naval Base, Marine Corp Air Ground Combat Center, and the Chocolate Mountain Gunnery Range. Duties included surveying for Desert tortoises, attachment and removal of tracking devices, and conducting basic health assessments on desert tortoises.

Wildland international/Southern Nevada Water Authority

March 2005, June-August 2006, May-July 2007, February 2008

Proposed Surface and Groundwater Diversion Projects

Las Vegas, NV-Ely, NV

Botanist

A project to divert groundwater from northern and central NV to southern NV. Duties included surveying for threatened, endangered and watch list species at the federal, state, and regional level. This Project enabled me to work and learn from many highly regarded botanists (Jim Andre, Glen Clifton, Frank Smith) during extensive and wide ranging rare plant surveys on >5,000 acres and >150 linear miles of proposed pipeline in Montane, Great Basin, and Creosote-bush scrub habitats. Approved by BLM and USFWS in Las Vegas, NV to conduct rare plant surveys.

BioResources inc/ El Paso Gas

July 2007-September 2007

High Plains Expansion project, Piecance Basin Expansion

Denver, CO and Craig CO

Environmental Inspector

Responsible for setting and checking traps during pre construction surveys for the endangered Prebbles jumping mouse, and ensuring environmental compliance during post construction herbicide applications on the Pieceance Basin Expansion pipeline.

**Southwind Conservation inc/ Bureau of Indian Affairs
August-September 2006**

Navajo Nation Rangeland Studies Project
Botanist

I was hired by Southwind conservation inc. to perform vegetation production surveys on the Navajo Nation in Northern AZ. Duties included species identification, and estimation of dry weight for all new growth in each plot.

**Bio Resources inc./ El Paso Gas
December 2005-March 2006**

Pieceance Basin Expansion
Biological Monitor

From late December of 2005 until March of 2006 I was hired by Bio Resources to monitor roosting eagles, and to conduct raptor nest surveys for the El Paso Gas Pieceance Basin expansion project. The Pieceance Basin expansion is a natural gas pipeline running from Wamsutter, WY to Rifle, CO..

**Grand Canyon Land Trust
July 2005-September 2005**

Baseline Biological Surveys
Kaibab Plateau, AZ
Botanist

In August of 2005 I worked for the Grand Canyon Land Trust conducting baseline vegetation, fuels inventories and coverage assessments on the Kaibab Plateau. The Grand Canyon Land Trust is a non profit that purchased the Kane ranch in southern Utah. It thereby obtained the grazing rights to the Kaibab allotment in northern Arizona and is currently conducting baseline assessments to determine optimal grazing regimes.

**University of Nevada Reno
Feburary 2005- June 2005**

Line Distance Surveys
Research Tech

UNR Provided me with my first opportunity to work in the Mojave desert as a research technician. My duties included conducting line distance surveys in southern Nevada, coordinating daily search efforts using ArcGIS.

Student Conservation Association/ Bureau of Land Mangement
May 2004-October 2004

Seeds of Success collection Program

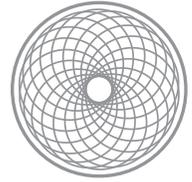
Crew Leader

From April through October of 2004 I had a Student Conservation Association (SCA) position as a Team Leader for a crew of 3 interns at the BLM in Kanab, Utah. Working with Laura Fertig, BLM Ecologist, my primary objectives were to lead a team to identify species and collect seeds from populations of native plants using the Seeds of Success collection protocol developed by the Royal Botanic Gardens. Duties included monitoring native plant populations, plant collection, species identification, herbarium curating, and assisting BLM staff with other projects as needed.

Adam Drummer

PO Box 664 Bend, OR 97709 Cell: 937.572.1655

adamdrummer@care2.com



Goals and Objectives

I wish to combine my knowledge of desert natural history and ecology with my wilderness travel skills to work as a field biology technician monitoring desert tortoises

Education

- Prescott College** *Prescott, AZ* **B.A. in Liberal Arts 2003**
- *Major:* Outdoor Experiential Education *Minor:* Environmental Studies
- The National Outdoor Leadership School** *Baja, Mexico* **2000 Fall Semester Course**
- Eighty-day outdoor leadership course with backpacking, climbing, sea kayaking, and sailing sections

Work Experience

- Lead Wilderness Guide** *Catherine Freer Wilderness Programs; Oregon* **February 2009 - Current**
- Provided wilderness leadership for a group of 4-8 adolescents on three-week therapeutic backpacking expeditions where the majority of travel is off-trail using map, compass & GPS
 - Responsible for the the physical safety of all clients and staff, expedition ilogistics, and teaching camp skills
- Outdoor Educator** *Naturalists at Large; Ventura, CA* **August 2004-November 2008**
- Managed and instructed two- to five-day natural history-focused outdoor education programs for school groups of ten to two hundred children at various sites throughout California
 - Led staff trainings for climbing, ropes course facilitation, cooking & food service, and Colorado River canoeing
- Trip Leader & Course Director** *Longacre Expeditions; Maine & Colorado* **Summers 2001- 2008**
- Instructed fourteen- to twenty-eight day adventure trips for teens in Maine, New Hampshire, Nova Scotia, and Colorado facilitating experiences in climbing, backpacking, mountaineering, kayaking, rafting, sailing, bike touring, and communication skills
 - Independently managed course logistics and oversaw all operations for the Maine & Oregon basecamps
 - Coordinated trainings for twenty-five staff, planned logistics with outfitters, problem-solved, fostered communication with parents, and held responsibility for the overall well-being for up to 150 teenagers
 - Created a 100-page natural history, New England course-area specific guidebook for staff to use as a reference during their expeditions
- Orientation Instructor** *Prescott College; Prescott, AZ* **August–September 2005 & 2006**
- Instructed a twenty-eight-day wilderness backpacking college course for a group of ten students
 - Taught desert canyon travel skills, first aid, natural history, and mentored students' transition to the college
- Assistant Director** *Longacre Expeditions; Newport, PA* **October 2005–August 2006**
- Recruited summer campers, planned course area logistics, secured permits, developed marketing, social networking & e-mail advertising, and designed in-home slideshows and print media
- Timber Crew** *United States Forest Service; Prescott, AZ* **October-December 2003**
- Surveyed and marked 1 to 100 acre plus Ponderosa pine forest plots to monitor for bark beetle infestation utilizing both GPS and map/compass

Additional Work Experience

- Substitute Teacher** *Anchorage School District; Anchorage, AK* **January – March 2007**
- Classroom substitute teacher for kindergarten through twelfth grades
- Basecamp Cook** *National Outdoor Leadership School; Driggs, ID* **November 2004-April 2005**
- Independently planned & prepared in-town meals for up to forty students and staff at the Teton Valley branch

- Lift Operator** **Grand Targhee Ski Resort; Alta, WY** **November 2004-April 2005**
- Responsible for the set-up and daily operations of resort's ski lifts
- Construction Laborer** **Cretcher-Robinson, LLC; Dayton, OH** **February-May 2004**
- Laborer for a remodel of a dental office. Skilled in framing, drywall, painting, and basic finish carpentry
- Outdoor Instructor** **Ohio University Outdoor Pursuits; Athens, OH** **Jan. 2000-June 2001**
- Developed the Wilderness Trip Leaders Program. Planned and instructed two- to eight-day outdoor trips

Volunteer

- Adaptive Ski Instructor** **Oregon Adaptive Sports; Bend, OR** **December 2008 - present**
- Instructor for a non-profit based program that teaches alpine and nordic skiing to children and adults with disabilities

Certifications

- Wilderness First Responder & CPR
- Avalanche I and II
- Positive Control Systems (through Catherine Freer)

Alana Frost
Resident Biologist
702-596-4353

Education:

- B.S. Biology, Rocky Mountain College, Billings, Montana, 2007

Professional Experience:

- Educate and train biologists in USFWS techniques for: tortoise clearance/survey, burrow and nest excavation, artificial burrow construction, recording/collecting data and sign, and relocation.
- Provide Endangered Species Act Section 7 and Section 10 compliance consultations both onsite and in office, with the protocols set forth by USFWS Biological Opinions and Habitat Conservation Plans and perform mitigation actions as necessary
- Prepare compliance reports, biological assessments, weed risk assessments and weed management plans; abundance estimates for tortoise presence, and monthly project reports for both clients and oversight agencies
- Prepare scientific reports and formal responses for use in California Energy Commission project hearings.
- Assist USFWS and BLM with alterations to protocol and documentation as needed.
- Act as a Compliance Inspection Contractor to ensure all environmental concerns are mitigated.
- Compose weed risk assessments and outline weed management plans and their field implementation.
- Perform Zone of Impact and Zone of Influence surveys and clearances for desert tortoises.
- Monitoring of desert tortoises and sensitive biological and botanical species during development projects.
- Ability to locate and document all signs of the desert tortoise including: habitat, nests, scat, tracks, burrows, dens, drinking sites, carcasses, and shell and egg fragments.
- Perform biological surveys for threatened, endangered and sensitive species (federal and state-listed species of concern)
- Perform inspections of desert tortoise exclusionary fencing for compliance with agency requirements.
- Use of a probing camera to effectively excavate animal burrows.
- Provide onsite and in-office environmental compliance and desert tortoise education programs.

Project Experience:

- *Ivanpah SEGS* – Project Manager; Desert tortoise surveys, onsite education program, Section 7 desert tortoise consultation, construction monitoring and compliance oversight. Translocation site abundance survey and report; Ivanpah, CA
- *Mountain Pass Wastewater Pipeline Removal* – Project Manager; Desert tortoise survey and fence installation monitoring; Mountain Pass, CA
- *Coyote Springs Transmission Line and Gemmill Substation* – Project Manager; Section 7 desert tortoise mitigation, monitor construction activities, compliance oversight; Coyote Springs, NV
- *Johnnie to Northwest Transmission Line* – Compliance Inspection Contractor; Section 7 desert tortoise clearance, construction monitoring and succulent plant species inventory. Weed

Alana Frost (Cont.)

mitigation and management plan. Interagency coordination and client mediation; Indian Springs, NV

- *Henderson C1 Detention Basin* – Project Manager; Section 7 desert tortoise consultation, onsite fence design review, develop client/project owner collaboration; Henderson, NV
- *Mesquite Community Materials Pit* – Project manager; Desert tortoise clearance and relocation: burrow excavation and artificial burrow construction; Mesquite, NV
- *SNWA 340-A* – Project Manager; Section 7 desert tortoise clearance, fence inspection and construction monitoring; Moapa, NV
- *Glendale Peak Communication Tower*- Project Manager; Section 7 desert tortoise clearance; Moapa, NV

References

Michelle McDermott
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Phone: (702) 525-5957

Tracie Wheaton
BrightSource Energy
Environmental Compliance Manager
10161 Park Run Drive, Suite 150
Las Vegas, NV 89145
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Mark H. Cochran
CH2M HILL
Senior Biologist
559 E Roger Road
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Phone (520) 293-5054
mcochran@ch2m.com

TIMOTHY J. HOCKIN

SUMMARY OF QUALIFICATIONS

- Diverse work and other experience in field biology, teaching and guiding
- Experienced in detailed note-taking and field-documentation in extreme climates and conditions
- Adapted to living in diverse cultures and places, with equally diverse people

PROFESSIONAL AND RELATED EXPERIENCE

Fall 2010 NOAA/National Marine Mammal Lab, Pribilof Islands, Alaska
Fur Seal Project Volunteer

- Handled fur seal pups and adult females during fall field session on St. George Island rookeries. Project involved processing and tagging over 1700 pups, and anesthetizing and processing over 100 adult female fur seals. Exposed to a wide variety of fur seal handling and monitoring methods.

Spring 2008-Present Independent Biology Field Contractor, Mojave Desert, California
Desert Tortoise Field Biology Contractor

- Contracting work for the USGS as a field technician on various research projects with federally listed Desert Tortoise (*Gopherus agassizii*). Field projects include independent and team-based work on long-term study plots, tortoise health analysis projects, and translocation work. Carry out vegetation assessments and plot analysis/summaries using various transect techniques. Current California Scientific Collection Permit holder.
- Desert Tortoise Trainings and workshops:
 - *Desert Tortoise Handling, Health, and Blood Drawing Techniques, Dr. Kristin Berry, Desert Tortoise Conservation Center, Las Vegas, NV.*
 - *Desert Tortoise Field Techniques Workshop, Ridgecrest, CA. Annual field seminar, various instructors.*
 - *Shell Skeletal Remains Survey and Collection Techniques, Dr. Kristin Berry, Riverside, CA.*

Fall 2007 Northern Southeast Regional Aquaculture Association, Haines, Alaska
Field Technician

- Field-collection of Chum salmon brood-stock in Klehini and Chilkat River systems. Hand-seining collection through field-identified spawning channels in adverse weather conditions.

2005-2007 Alaska Crossings Wilderness Expeditions, Wrangell, Alaska
Assistant Director/Head Guide

- Developed and implemented curriculum for in-depth experiential science education program. Head-guide on wilderness programs from 33-46 days in length for both youth and youth at-risk. River paddling, mountaineering, and ocean paddling components. Assistant director/management duties for one year.

2002-2003 Master of Arts in Teaching, Sitka, Alaska

Teaching Placement, Secondary Science

- Created and taught science curricula for nine months in alternative high school setting. Collaborated with staff to create field-based learning projects for students. Curriculum anchored in project-based, hands on learning endeavors supported by Expeditionary Learning Outward Bound (ELOB) school reform model.
- Completed all masters-level coursework and a project portfolio to earn a Masters degree in teaching, as well as an Alaska State Teaching Certificate in secondary science curriculum.

1998-2002 Voyager Outward Bound School, Minnesota, Texas and Chihuahua, Mexico

Course Instructor

- Designed and instructed wilderness courses from seven to forty-nine days in length with an emphasis on wilderness desert travel, self-discovery, and group process. Organized specific interactions including community meals and volunteering projects for participants enrolled in Mexico-specific courses. Translated unique and spontaneous interactions between participants and locals in rural northern Mexico.

2003-2005 Trans-Continental Cycling Expedition, North, Central, and South America

- Sixteen-month solo bicycling expedition across fourteen countries in North, Central and South America. Fulfillment of a dream rooted in continuous exploration of Latin American culture and ongoing adventure.

EDUCATION

2002-2003 University of Alaska Southeast Sitka, Alaska

Master of Arts, Teaching; Alaska State Teaching Certificate, Secondary Life Science/Biology

1994-1998 Saint John's University Collegeville, Minnesota

Bachelor of Arts, Biology; Peace Studies

Kip Kermoian

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Expertise Wildlife Biology
Sensitive Species
Environmental Inspection
Documentary Production
Aerial surveys

Experience **Owner, Alaska Biological Services** Work has included aerial, terrestrial, marine, and freshwater research, surveys and documentary recording of sensitive, threatened and endangered species, wildlife, marine mammals and fish, preconstruction surveys, monitoring and inspection. Projects have included work for U.S., and state governments; universities; natural gas transmission companies; oil companies; pipeline maintenance service companies; mining companies; consultancies and private clientele.

Biologist/Consultant Ironwood Consulting, Ironwood Consulting
1412 S. Center St. Redlands, CA 92373 (909)-289-4649
(March-May 2010) Conducted desert tortoise presence/absence surveys, lizard and bird surveys and small mammal trapping in the east Mojave.

Biologist/Consultant Ironwood Consulting, Ironwood Consulting
1412 S. Center St. Redlands, CA 92373 (909)-289-4649
(October 2009) Conducted desert tortoise presence/ absence surveys in the east Mojave

Biologist/Consultant Kemp Anderson, 324 ½ 15th St. Seal Beach, CA 90740 (September-October 2009) Conducted desert tortoise presence/ absence surveys and blood and health assessment in the west Mojave

Biologist/Consultant Sundance Biological, Inc. 179 Niblick Rd. PMB 272 Paso Robles, CA 93446 (April-May 2009) Clearance Survey for desert tortoises west Mojave

Biologist/Consultant Tracy Bailey 619 Pinon Court Ridgecrest, CA. 93555 (April 2009) Hectare surveys for desert tortoise sign, human impacts and plants in east Mojave

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527 (March-April 2009). Re-transmitting, and health assessments of desert tortoise, Fort Irwin translocation sites in the west Mojave.

Experience cont.

Biologist/Consultant Ironwood Consulting, Ironwood Consulting 1412 S. Center St. Redlands, CA 92373 (909)-289-4649 (March-May 2009) Conducted desert tortoise presence/ absence surveys, plant, lizard and bird surveys and small mammal trapping in the east Mojave

Biologist/Consultant Kemp Anderson, 324 ½ 15th St. Seal Beach, CA 90740(October-November 2007) Conducted desert tortoise presence/ absence surveys and blood and health assessment in the west Mojave

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(October 2007). Desert tortoise surveys western Arizona.

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(September-October 2007). Re-transmitting and health assessments and clearance surveys of desert tortoise at Fort Irwin Translocation Sites in the west Mojave

Biologist/Consultant Kathy Buescher-Simon 1412 S. Center St. Redlands, CA 92373 (909)-289-4649 (June 2007) Triangle surveys for desert tortoise sign Edwards AFB,

Biologist/Consultant Rachael Woodard PMB 613 1539 N. China Lake Blvd., Ridgecrest, CA 93555 (May-June 2007) Blood and health assessments of desert tortoises Fort Irwin, CA

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(May 2007). Clearance surveys of desert tortoise at Fort Irwin in the west Mojave

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(March-May 2007). Line-Distance sampling for desert tortoise in the Mojave

Biologist/Consultant Kathy Buescher-Simon 1412 S. Center St. Redlands, CA 92373 (909)-289-4649/ TetraTec (October-November 2006) triangle surveys for desert tortoise sign on Edwards AFB

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(October 2006). Clearance surveys of desert tortoise at Fort Irwin in the west Mojave

Biologist/Consultant Natural Resource Consultants, 510 Anita St. Laguna Beach, CA 92651 (May 2006) Fringe-toe lizard surveys Coachella Valley. CA

Biologist/Consultant e-Corp Consulting 412 E. State St., Redlands, CA (April 2006) presence/absence surveys for desert tortoises Apple Valley, CA

Biologist/Consultant Natural Resource Consultants, 510 Anita St. Laguna Beach, CA 92651 (April 2006) Sensitive plant surveys Tejon Ranch., CA

Experience cont.

Biologist/Consultant Natural Resource Consultants, 510 Anita St. Laguna Beach, CA (March 2006) presence/absence for desert tortoise surveys Coachella Valley. CA

Biologist/Consultant Natural Resource Consultants, 510 Anita St. Laguna Beach, CA 92651 (June 2005 and November 2005) Conducted desert tortoise presence/ absence surveys in the west Mojave

Biologist/Consultant Alice Karl, PO Box 74006 Davis CA 95617 (October 2005) Conducted desert tortoise clearance surveys in the east Mojave at the Mesquite Regional Land Fill

Biologist/Consultant Mercy Vaughn, PO Box 2475 Flagstaff, AZ 86003 Hyundai-Kia test track. Removal of desert tortoise fencing (October-November 2005)

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(2003-2005). Conducted line distance sampling surveys to assess desert tortoise densities throughout the Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Bill Vanherweg, Mercy Vaughn, Steve Boland (May-June 2004 and October 2004)) Conducted desert tortoise clearance surveys throughout the Hyundai-Kia test track site in California City, CA.

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(2004). Conducted sensitive plant surveys on Nellis Air Force Base, Las Vegas, NV.

Biologist/Consultant EnviroPlus Consulting Group, 1660 West Franklin Ave., Ridgecrest CA 93555 (1990). Established and conducted disease-plot transect surveys for the desert tortoise, assessed abundance, health, predation mortality, other mortality, collected and recorded biological data and relevant floral and faunal observations, marked and tagged live tortoises, collected and reconstructed carcasses and mapped borrow dimensions.

Biologist/Consultant Dames and Moore, 4220 South Maryland Parkway, #108, Las Vegas, Nevada 89119 (1991). Monitored the construction of the Kern River Gas Transmission Line for sensitive species and for compliance with state and federal regulations. Relocated sensitive species, located and protected desert tortoise burrows from blasting impacts, recorded observations and compiled daily reports.

Biologist/Consultant EnviroPlus Consulting Group, 1660 West Franklin Ave., Ridgecrest CA 93555(1992). Conducted a sheep grazing study on BLM public lands to determine the impact of sheep grazing on

Experience cont.

desert tortoises, their burrows and habitat. Constructed artificial burrows for juvenile, immature and adult desert tortoises and mapped locations.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614(2001-2002). Conducted line distance sampling surveys to assess desert tortoise densities throughout the western Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2002). Located and applied new telemetry radios to desert tortoises and conducted tracking surveys for a population in the Superior-Cronese DWMA for the USFWS, BLM and the University of Nevada.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2002). Conducted transect surveys for desert tortoise in the western Mojave's Big Rock Creek for Volcan Mining Company

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2002). Located and applied new telemetry radios to desert tortoises and conducted tracking surveys of the same population in southwestern Mojave's Fremont-Kramer DWMA for the USFWS, BLM and the University of Nevada.

Biologist/Consultant Kiva Biological Consulting, PO Box 1210 Inyokern, CA 93527 (2001). Conducted line distance sampling surveys to assess desert tortoise densities in the eastern Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2001). Located, applied telemetry radios and assessed condition and sex of desert tortoises and conducted tracking surveys for two populations in the western Mojave's Superior-Cronese DWMA for the USFWS, BLM and the University of Nevada.

Biologist/Consultant CH2MHILL, 2485 Natomas Park Drive, Suite 600, Sacramento, CA 95833(2001). Conducted wildlife surveys for Mojave ground squirrels, desert tortoises, western fringed-toed lizards and other species in Indio, CA. Recorded and reported observations.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2001). Conducted wildlife surveys for fringed-toed lizards for possible railroad right-of-way expansion in the Coachella Valley, CA Recorded and reported observations.

Biologist/Consultant BonTerra Consulting, Inc., 151 Kalmus Drive, Suite E-200, Costa Mesa, CA. (2001). Conducted wildlife surveys for freeway expansion in Indio, CA. Recorded and reported observations.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2001). Located, applied telemetry radios and assessed condition and sex of desert tortoises and conducted tracking surveys of the same population in Fremont-Kramer DWMA for the USFWS, BLM and the University of Nevada.

Sport Fish Biologist I Alaska Department of Fish & Game, Division of Sport Fisheries Haines, Alaska 99827 (1998-1999). Oversaw the operation of up to six field research projects and supervised up to 10 employees while ensuring that methods, means and project goals followed the project plan in a safe manner. Collected, reported, and summarized all field data and regularly provided the Area Biologist with status reports. Communicated and enforced compliance with the policies and regulations of the State of Alaska. Operated and maintained a broad array of field and office equipment including jet, prop and air boats.

Fish and Game Technician IV Alaska Department of Fish and Game, Division of Commercial Fisheries/Management, Haines, Alaska 99827 (1986-1997). Safely monitored the commercial harvest of 5 species of salmon and supervised up to 4 employees while conducting field research and management surveys. Compiled daily reports for the Area Management Biologist and enforced compliance with the policies and regulations of the State of Alaska. Operated and maintained a broad array of field and office equipment including jet, prop and air boats and a PA-18 Super Cub aircraft.

Wildlife Technician III Alaska Department of Fish and Game, Division of Wildlife Conservation, Juneau, Alaska 99801 (1990). Live trapped, radio collared and tagged Brown Bears from residential neighborhoods and remote community dumpsites.

Wildlife Technician III Alaska Department of Fish and Game, Division of Wildlife Conservation, Juneau, Alaska 99801 (1990). Live trapped, radio collared and tracked – from the ground and air – american martens and mink to assess habitat use in the Tongass National Forest

Fish and Game Technician III Alaska Department of Fish & Game, Division of Commercial Fisheries/Research, Haines, Alaska, 99827 (1982-1985). Constructed and maintained a remote field cabin and fish weir. Supervised one employee and was responsible for the collection and reporting of field data to the Research Biologist. Used and maintained a variety of tools, and field equipment, and used SCUBA for the underwater construction of the fish weir.

Wildlife Technician U.S. Fish & Wildlife, Marine Mammals Division, Anchorage, Alaska (1984-1985). Monitored & documented the harvest of walrus, polar bears, whales, seals and sea birds in the Siberian Yupik Village of Gambell on St. Lawrence Island, in the Bering Sea, Alaska. Supervised a local assistant and participated in the collection of a variety of biological data and samples for analysis. Conducted community meetings, mapped community households, managed an operating budget

Experience cont.

and wrote seasonal reports. Operated and maintained 3 and 4 wheelers and snow machines.

Wildlife/Consultant Alaska Department of Fish and Game, Wildlife Conservation, Fairbanks Alaska, (1982). Live-trapped, radio collared, and tracked wolverines in the Alaska Range as part of an EA for a proposed dam on the Susitna River.

Wildlife Technician Alaska Cooperative Wildlife Research Unit, University of Alaska, Fairbanks, Alaska (1979-1981). Live trapped, radio collared, aerial and terrestrial (skis and snow machines) tracked wolverines, and collected base line data on home range, territories, dens, prey selection, caching behavior, movements and habitat utilization in the Brooks Range. Collected, prepared and analyzed biological samples, constructed remote campsites, operated snow machines, telemetry equipment and shot and edited a 16mm film about the field project. Also captured and tagged red and arctic fox, and radio tracked grizzly bears.

Wildlife Technician Alaska Cooperative Wildlife Research Unit, University of Alaska, Fairbanks (1978). Monitored the use of mineral licks by moose in Denali National Park. Established a remote camp, recorded daily lick use by sex and age class, collected samples and reported results to the principle investigator.

Wildlife Rehabilitation Technician San Francisco Zoo, San Francisco, CA (1971). Exercised and prepared birds of prey for hacking following successful rehabilitation

Wildlife Rehabilitation Technician Home facility, Corte Madera CA 94925(1970-1972). Housed and rehabilitated birds of prey for hacking following successful rehabilitation

Rehabilitation Co-Founder and Technician/Assistant Curator Louise A. Boyd Museum, San Rafael, CA (1970-1972). Developed a rehabilitation component at the Louise A. Boyd Museum to treat injured and ill birds and wildlife and established relationships with local veterinarians to enlist their support and services.

Academic Background

B.S. (1984) multidisciplinary in Wildlife, Film and Anthropology, University of Alaska Fairbanks, Fairbanks, Alaska

Certifications

California Scientific Collecting Permit: SC-8522; USFWS Permitted Desert Tortoise Handler, Pilots License SELAS, Radio Telephone Operators, Raptor Rehabilitation, Wildlife Rescue Response, First Responder Swift Water Rescue, CPR, NAUI Diver

Workshops

Desert Tortoise handling, marking and construction of artificial burrows, Radio Telemetry Application and Tracking, Line Distance Sampling Techniques

**Professional
Affiliations**

Southeast Alaska Conservation Council, Lynn Canal Conservation

References

Available upon request

Project and Client List

The following is a partial list of project groups and associated work conducted by Alaska Biological Services in wildlife and fisheries biology, and documentary film. This list includes work with the following species: grizzly bear, black bear, polar bear, moose, wolverines, arctic foxes, red foxes, martens, mink, Steller's sea lion, bowhead and gray whales, pacific walrus, spotted, ringed, ribbon and bearded seals, bald and golden eagles, red-tailed, red-shouldered and swainson's hawk, prairie falcon, american kestrel, sharp-shinned and cooper's hawks, northern harrier, white-tailed kite, great horned owl, western screech owl, barn owl, northern hawk owl, burrowing owl, great blue heron, black crowned night heron, and a variety of water fowl and passerines, common raven, northwestern crow, desert tortoise, western fringed-toed lizard, Mojave ground squirrel, mountain plover, giant chuckwalla, chinook, coho, sockeye, pink and chum salmon and dolly varden.

Pipeline Projects

- 2002 Colorado Interstate Gas Company, Ft. Lupton Station Expansion, Ft. Lupton, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector during the facility expansion and installation of an additional compressor to the Ft. Lupton compressor station. Inspected facility construction activities for environmental compliance, communicated findings to chief inspector, conducted environmental training for construction and support crews, maintained written and photographic records of construction, and compiled daily reports.
- 2002 Colorado Interstate Gas Company, Valley Line Expansion, Castle Rock, Colorado. Bio-Resources, Inc., Logan, Utah Environmental Inspector ensuring contractor's compliance with State and Federal environmental regulations relating to the construction of the natural gas pipeline, conducted environmental training for craft inspectors, construction and support crews, maintained written and photographic records of construction, and compiled daily reports.

Pipeline Projects cont.

- 2002 El Paso Corporation Environmental Training Video, Haines, Alaska, Kermoian Productions for El Paso Corporation Produced an environmental training video for chief craft inspectors and other contractor employees for use as part of a required orientation prior to beginning work on natural gas pipelines for El Paso.
- 2002 Colorado Interstate Gas Company, 5C north-Ault to Cheyenne Loop, Greeley, Colorado. Bio-

Resources, Inc., Logan, Utah. Conducted preconstruction surveys for sensitive species within the right-of-way and zone of influence prior to the construction of the 5C Ault to Cheyenne Loop pipeline.

- 2001 Colorado Interstate Gas Company, 5C South-Watkins to Fort Lupton, Greeley, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with State and Federal environmental regulations relating to the construction of the natural gas pipelines, conducted environmental training for craft inspectors, construction and support crews, maintained written and photographic records of construction, and compiled daily reports.
- 2001 Colorado Interstate Gas Company, 5C north-Ault to Cheyenne Loop, Greeley, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with State and Federal environmental regulations relating to the construction of the natural gas pipelines, conducted environmental training for craft inspectors, construction and support crews, maintained written and photographic records of construction, and compiled daily reports.
- 2001 Colorado Interstate Gas Company, 5C north-Ault to Cheyenne Loop, Greeley, Colorado. Bio-Resources, Inc., Logan, Utah. Conducted pre and mid construction surveys for Mt. Plovers and their nest sites within the right-of-way and zone of influence of the 5C Ault to Cheyenne Loop pipeline. Flagged and monitored critical sites to determine when appropriate construction could begin.
- 2001 Colorado Interstate Gas Company, Ft. Lupton Compressor Station, Ft. Lupton, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with state and Federal environmental regulations during the construction of the Ft. Lupton compressor station. Inspected facility construction activities for environmental compliance, communicated finding to chief inspector, conducted environmental training for construction and support crews, maintained written and photographic records of construction, and compiled daily reports. Made daily observations of Swainson's hawk nest associated with the construction zone.
- 1990- See above "Experience"
1992

Pipeline Projects cont.

- 1981 Houston Oil and Mineral Corporation, Fairbanks and Circle, Alaska
Expedited parts, fuel, groceries, etc. for one of Houston's remote exploratory camps in northern Alaska.
- 1977 Associated Pipe Line Contractors, Inc and Green Construction Company, Brooks Range, Alaska. Worked a variety of labor related positions from helicopter crewmember slinging loads of sediment barriers for erosion control to filling VSMs with slurry on the Alaska oil pipeline.
- 1976 British Petroleum, Brooks Range, Alaska.
Worked as a hard rock driller's helper drilling exploratory cores for mineral in the Brooks Range.

Film / Video

Presently in Production Kermoian Productions, Haines, Alaska
Documentary about how people develop perceptions about bears and how those perceptions influence management decision with regard to bear/people conflict.

Presently in Production Kermoian Productions, Haines, Alaska
“Nikki”(working title), a documentary about an adopted baby girl, the realization by her new parents that she is blind, her blindness is caused by a growing brain tumor, and the subsequent life they face together.

2007 Kermoian Productions, Haines, Alaska
Producing an epilogue for the feature film, “Year of the Caribou”, an intimate story about a family’s life in the remote wilderness of Alaska, Brooks Range

2002 El Paso Corporation, 1001 Louisiana Street, Houston TX. 77002

Film / Video cont.

Produced, shot and co-edited an environmental training video for El Paso Corporation– see above “Pipeline”

2001-2002 “Bear Wars”, Turner Original Productions, National Wildlife Productions, Anderson Production’s, Brookline, MA. DP for “Bear Wars” a documentary about the reintroduction of grizzly bears to Idaho and Montana.

2001-Present “Rhythms of Africa”(working title), Kermoian Productions, Haines, Alaska
Documentary about traveling and camping throughout Botswana, the Kalahari Desert to Zimbabwe.

1998-1999 “Return of the Eagles” Turner Original Productions, National Wildlife Productions, Anderson Production’s, Brookline, MA Worked as a fixer and production assistant on location in Alaska

1996 “Black Light America” Black Light Films, Studio City, CA
Worked as a production assistant on location in Alaska

1985-1987 “Ayveghnilleghput”, (Our Relationship With Walrus), St. Lawrence Island, Alaska Kermoian Productions, Haines, Alaska. Produced, shot and edited the award winning film “ Ayveghnilleghput” (Our Relationship with Walrus) a community determined film about a Siberian Yupik community’s contemporary relationship with walrus

Patricia Kermoian

Address

PO Box 1024
Haines, Alaska 99827

**Phone
e-mail**

(907) 766-2606
alaskakip@yahoo.com

Expertise

Wildlife and Fisheries Biology
Sensitive Species
Environmental Inspection

Experience

Employee, Alaska Biological Services Work has included aerial, terrestrial, marine, and freshwater research and surveys of sensitive, threatened and endangered species, wildlife, marine mammals and fish, preconstruction surveys, monitoring and inspection. Projects have included work for U.S., and state governments; universities; natural gas transmission companies; mining companies; consultancies and private clientele.

Biologist/Consultant Natural Resource Consultants, 510 Anita St. Laguna Beach, CA 92651 (June 2005 and November 2005) Conducted desert tortoise presence/ absence surveys in the west Mojave

Biologist/Consultant Alice Karl, PO Box 74006 Davis CA 95617 (October 2005) Conducted desert tortoise clearance surveys in the eastern Mojave at the Mesquite Regional Land Fill

Biologist/Consultant Mercy Vaughn, PO Box 2475 Flagstaff, AZ 86003 Hyundai-Kia test track. Removal of desert tortoise fencing (October-November 2005)

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(2003-2005). Conducted line distance sampling surveys to assess desert tortoise densities throughout the Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Bill Vanherweg, Mercy Vaughn, Steve Boland (May-June 2004 and October 2004)) Conducted desert tortoise clearance surveys throughout the Hyundai-Kia test track site in California City, CA.

Biologist/Consultant Kiva Biological Consulting, PO Box 1219 Inyokern, CA 93527(2004). Conducted sensitive plant surveys on Nellis Air Force Base, Las Vegas, NV.

Experience cont.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2002). Located and applied new telemetry radios to desert tortoises and conducted tracking surveys of the same population in southwestern Mojave's Fremont-Kramer DWMA and the Superior-Cronese DWMA for the USFWS, BLM and the University of Nevada.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2002). Conducted transect surveys for desert tortoise in the western Mojave's Big Rock Creek for Volcan Mining Company

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614(2001-2002). Conducted line distance sampling surveys to assess desert tortoise densities throughout the western Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Kiva Biological Consulting, PO Box 1210 Inyokern, CA 93527 (2001). Conducted line distance sampling surveys to assess desert tortoise densities in the eastern Mojave Desert in California for the USFWS, BLM, and the University of Nevada. Worked in remote areas documenting density, assessing condition and collecting and recording biological data on desert tortoises.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2001). Located, applied telemetry radios and assessed condition and sex of desert tortoises and conducted tracking surveys of the same population in Mojave's Superior-Cronese DWMA and the Fremont-Kramer DWMA for the USFWS, BLM and the University of Nevada.

Biologist/Consultant CH2MHILL, 2485 Natomas Park Drive, Suite 600, Sacramento, CA 95833(2001). Conducted wildlife surveys for Mojave ground squirrels, desert tortoises, western fringed-toed lizards and other species in Indio, CA. Recorded and reported observations.

Biologist/Consultant Chambers Group, Inc. 17671 Cowan Ave. Suite 100, Irvine CA 92614 (2001). Conducted wildlife surveys for fringed-toed lizards for possible railroad right-of-way expansion in the Coachella Valley, CA Recorded and reported observations.

Biologist/Consultant BonTerra Consulting, Inc., 151 Kalmus Drive, Suite E-200, Costa Mesa, CA. (2001). Conducted wildlife surveys for freeway expansion in Indio, CA. Recorded and reported observations.

Biologist/Consultant EnviroPlus Consulting Group, 1660 West Franklin Ave., Ridgecrest CA 9355(1992). Conducted a sheep grazing study on BLM public lands to determine the impact of sheep grazing on desert tortoises, their burrows and habitat. Constructed artificial burrows for juvenile, immature and adult desert tortoises and mapped locations.

Experience cont.

Biologist/Consultant Dames and Moore, 4220 South Maryland Parkway, #108, Las Vegas, Nevada 89119 (1991). Monitored the construction of the Kern River Gas Transmission Line for sensitive species and for compliance with state and federal regulations. Relocated sensitive species, located and protected desert tortoise burrows from blasting impacts, recorded observations and compiled daily reports.

Biologist/Consultant EnviroPlus Consulting Group, 1660 West Franklin Ave., Ridgecrest CA 93555 (1990). Established and conducted disease-plot transect surveys for the desert tortoise, assessed abundance, health, predation mortality, other mortality, collected and recorded biological data and relevant floral and faunal observations, marked and tagged live tortoises, collected and reconstructed carcasses and mapped borrow dimensions.

Fish and Game Technician IV Alaska Department of Fish & Game, Division of Sport Fisheries Haines, Alaska 99827 (1998-2000). Crew leader for up to 6 employees, constructed remote camps, conducted coded wire tagging project for king and coho salmon, operated jet and outboard powered boats, while ensuring that methods, means and project goals followed the project plan in a safe manner. Collected, reported, and summarized all field data and regularly provided the Area Biologist with status reports, communicated and enforced compliance with the policies and regulations of the State of Alaska.

Fish and Game Technician IV Alaska Department of Fish and Game, Division of Commercial Fisheries/Management, Haines, Alaska 99827 (1998-2000). Safely monitored the commercial harvest of 5 species of salmon and supervised up to 4 employees while conducting field research and management surveys. Compiled daily reports for the Area Management Biologist and enforced compliance with the policies and regulations of the State of Alaska. Operated and maintained a broad array of field and office equipment including jet, inboard and outboard powered boats.

Fish and Game Technician III Alaska Department of Fish & Game, Division of Sport Fisheries Haines, Alaska 99827 (1992-1997). Crew leader for one technician conducting marine creel surveys, collecting and reporting biological data. Frequently communicated regulations and fishery status to the public.

Fish and Game Technician III Alaska Department of Fish & Game, Division of Sport Fisheries Haines, Alaska 99827 (1991). Supervised three technicians in the operation of fish wheels for capturing, marking and radio tagging chinook salmon. Operated jet and prop powered boats, surveyed drainages, tracked radioed fish and collected, recorded and reported data to Area Biologist.

Fish and Game Technician III Alaska Department of Fish & Game, Division of Commercial Fisheries/Research, Haines, Alaska, 99827 (1990-1997). Monitored the commercial harvest of 5 species of salmon conducted stream surveys, reported daily catch figures, collected biological samples and data for analysis. Issued fish and game permits,

Experience cont.

and manned a moose check station. Operated and maintained a broad array of field and office equipment including jet, prop powered boats.

Fish and Game Technician III Alaska Department of Fish & Game, Division of Commercial Fisheries/Research, Haines, Alaska, 99827 (1982-1990). Constructed and maintained a remote field cabin and fish weir. Supervised one employee and was responsible for the collection and reporting of a wide variety of biological data to the Area Research Biologist. Used and maintained a variety of tools, and field equipment.

Academic Background

B.S. (1978) in Environmental Conservation
University of New Hampshire, Durham, New Hampshire

Certifications

California Scientific Collecting Permit: SC-8523; USFWS Permitted Desert Tortoise Handler, First Responder Swift Water Rescue, CPR, National Weather Service Spotter

Workshops

Desert Tortoise handling, marking and construction of artificial burrows, Radio Telemetry Application and Tracking, Line Distance Sampling Techniques

Countries Worked In

United States, Mexico, Botswana, Tanzania, Zimbabwe

Professional Affiliations

Southeast Alaska Conservation Council, Lynn Canal Conservation

References

Available upon request

Project and Client List

The following is a list of projects conducted as an Alaska Biological Services employee in wildlife and fisheries biology, and documentary film. This list includes work with the following species: Stellar's sea lions, river otters, moose, bald eagle, american kestrel, burrowing owl, great blue heron and passerines, desert tortoise, western fringed-toed lizard, Mojave ground squirrel, giant chuckwalla, chinook, coho, sockeye, pink and chum salmon, dolly varden, dungeness crab, coonstripe and spotted shrimp.

Pipeline Projects

- 2001 Colorado Interstate Gas Company, 5C South-Watkins to Fort Lupton, Greeley, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with State and Federal environmental regulations relating to the construction of the natural gas pipelines, maintained written and photographic records of construction, and compiled daily reports.
- 2001 Colorado Interstate Gas Company, 5C north-Ault to Cheyenne Loop, Greeley, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with State and Federal environmental regulations relating to the construction of the natural gas pipelines, maintained written and photographic records of construction, and compiled daily reports.
- 2001 Colorado Interstate Gas Company, Ft. Lupton Compressor Station, Ft. Lupton, Colorado. Bio-Resources, Inc., Logan, Utah. Environmental Inspector ensuring contractor's compliance with state and Federal environmental regulations during the construction of the Ft. Lupton compressor station. Inspected facility construction activities for environmental compliance, communicated finding to chief inspector, maintained written and photographic records of construction, and compiled daily reports.

1990-1992 See above "Experience"

Craig J. Knowles, PhD
FaunaWest Wildlife Consultants
Senior Wildlife Ecologist, Partner

Ph.D. Zoology, 1982. University of Montana.

Dissertation Title: Habitat Affinity, Populations, and Control of Black-tailed Prairie Dogs on the C.M. Russell National Wildlife Refuge.

M.S. Fish and Wildlife Management, 1975. Montana State University

Thesis Title: Range Relationships of Mule Deer, Elk and Cattle in a Rest-Rotation Grazing System During Summer and Fall.

B.S. Fish and Wildlife Management, 1973. Montana State University

REPRESENTATIVE PROJECTS

Desert Tortoise Surveys:

EDAW/ABENGOA SOLAR. Assisted as a subcontractor conducting desert tortoise surveys on a proposed thermal solar energy site near Harper Lake, California. The project area covered approximately 7 square miles and was conducted in 2008 and 2009.

Western Technologies Inc. (subcontract). Conducted Phase I desert tortoise surveys on over 10,000 acres of private lands in Clark County, Nevada during a 2 year period. Parcels of land scheduled for development were intensively searched for tortoises and tortoise sign and each search effort was followed by a written report detailing the findings. The work included preparation of mitigation plans for Section 10a permits and Biological Assessments for Section 7 consultation. Additional work in Clark County included Phase II desert tortoise removal surveys on 2,600 acres. FaunaWest organized and supervised a crew of 15 people to remove 380 tortoises between 11 June and 5 November 1990 on six parcels of lands under the authority of Nevada Dept. of Wildlife. Reports summarizing the results of the surveys were submitted to NDOW and clients received certificates of desert tortoise removal. We also designed effective tortoise proof fences and monitored fence construction activity for the four largest parcels.

Knight & Leavitt & Associates (subcontract). Conducted a variety of desert tortoise surveys and mitigation for Knight & Leavitt clients. These included surveys in Valley of Fire State Park, a powerline survey and mitigation near Mesquite, Nevada, a proposed golf course site on the **Shivwits Indian Reservation**, a proposed belt-way around Las Vegas, and a proposed development at a desert spring. The latter three projects also involved desert bighorn sheep, small mammal, breeding bird and bat surveys.

SRI International. Conducted desert tortoise surveys at six candidate Ground Wave Emergency Network sites in Nye County Nevada, and at proposed NEXRAD radar and National Weather Service Office sites. The radar site survey was at Nelson Peak and included desert bighorn sheep observations.

Terracon Consultants. Conducted desert tortoise surveys on 2,000 acres of land in the Las Vegas Valley proposed for exchange between private developers and the Federal government. The survey work was summarized in reports submitted to the BLM. We also served as the ID team leader and wrote two NEPA sufficient Environmental Assessments for the land exchanges that were subject to public comment.

Bureau of Land Management. Conducted surveys for desert tortoises in the Mojave Desert at the Stoddard Valley desert tortoise trend plot in 1987, the Chemehuevi Wash and Desert Tortoise Natural Area trend plots in 1988, and the Fremont Peak trend plot in 1989. Also conducted a survey for diseased desert tortoises within and adjacent to the Desert Tortoise Natural Area in 1989. Detailed reports summarizing the findings of these studies were submitted to the BLM in accordance with contract requirements. We also have worked as a subcontractor on another Californian BLM trend plot and a Nevada Dept. of Wildlife trend plot.

Prairie Dog Conservation:

Tetra Tech/Montana Dept. of Fish, Wildlife and Parks: Visited approximately 200 prairie dog towns in Phillips County, Montana during the fall and winter of 2007-2008. Determined if the towns were active or inactive, and for active towns determined if they showed signs of plague activity. Active towns were mapped using a GPS unit. SSF files were given to Tetra Tech for differential correction.

FaunaWest Research Projects/Defenders of Wildlife/FanwoodWest Foundation/Nature Conservancy. Conducted a study, on black-tailed prairie dog ecology at a colony located on the Charles M. Russell National Wildlife Refuge. Supervised a project to live-trap and move prairie dogs located at Fort Harrison, MT to a new location at the base and to an abandoned colony on the CMR, and moved 150 prairie dogs from a private prairie dog colony at Shelby, MT to the same abandoned colony on the CMR. Moved 600 prairie dogs from private lands to 4 sites on the Matador Ranch in southern Phillips County as a first step to develop a large prairie dog complex.

Fort Belknap Community Council. Devised a management plan for black-tailed prairie dogs on the Fort Belknap Indian Reservation. Initiated a food-for-ferret program designed to supply captive ferrets with a prairie dog food source.

Northern Cheyenne Tribe/Defenders of Wildlife. Wrote a prairie dog ecosystem management plan for the Tribe and worked on 8 separate range units developing grazing strategies for management of prairie dogs. Relocated prairie dogs from a recovered plague impacted prairie dog colony on the Northern Cheyenne Reservation to two abandoned prairie dog colonies.

Defenders of Wildlife, US Fish and Wildlife Service, & Environmental Defense/National Wildlife Federation. Developed three black-tailed prairie dog status reports. Wrote a status report on the white-tailed and Gunnison's prairie dog.

Charles M. Russell NWR & Fort Belknap Community Council. Collected fleas from prairie dog burrows and sent specimens to the CDC for plague monitoring programs.

Montana Fish, Wildlife & Parks. Conducted a statewide inventory of black-tailed prairie dogs using GPS-based mapping.

BIA. Inventoried prairie dog colonies on the Crow Indian Reservation using GPS-based mapping.

North Dakota Game and Fish Dept. Developed a prairie dog population viability analysis for North Dakota. Conducted a state-wide prairie dog mapping project locating and mapping prairie dog colonies throughout their range in North Dakota in 2002 and 2006. Interviewed over 200 ranchers during both projects.

USDA Forest Service. Mapped black-tailed prairie dog colonies on the Little Missouri and Grand River Grasslands.

BLM. Mapped prairie colonies in the Phillips, Billings, Miles City and Belle Fourche resource areas.

South Dakota Game, Fish and Park. Studied prairie rattlesnake hibernation in prairie dog colonies on the Grand River National Grassland.

Black-footed Ferret Surveys: Conducted numerous black-footed ferret surveys for a variety of clients including Fort **Belknap Community Council**, Shell Mining Co., BioWest, Inc., Biota Research and Consulting, Inc., **BIA** and the Charles M. Russell National Wildlife Refuge. The surveys were conducted at a proposed mine site, along proposed WPA power transmission line, gas pipeline routes, a road construction project, and in advance of a prairie dog control programs. A biological assessment was written for the Fort Belknap Indian Reservation. We have also provided black-footed ferret survey training to **Tribal** members and assisted in locating reintroduced ferrets at **Fort Belknap**.

Additional ferret experience includes a temporary five month assignment with the US Fish and Wildlife Service in 1983 to assist in trapping, spotlighting, and tracking radio-marked ferrets near Meeteetse, WY.

Mountain Plover Surveys: **US Fish and Wildlife Service.** Collected 18 mountain plover eggs from 18 nests located on the Charles M. Russell National Wildlife Refuge and delivered them to the USFWS for a pesticide and selenium contamination study.

Bureau of Land Management. Conducted an 8 year study of mountain plovers in Montana evaluating historic mountain plover records to determine the current distribution. Established permanent census transects and conducted detailed observations in three areas occupied by mountain plovers. Submitted annual reports to the BLM summarizing the findings at the conclusions of each year's survey. Surveyed over 100 prairie dog colonies in the Billings Area Office district for mountain plovers and significantly expanded the known range of mountain plovers in Montana

Pre-mine Wildlife Surveys:

Homestake Mining Co. Conducted spring breeding bird, raptor, small mammal, and big game surveys at the Homestake's Lead mine site in the Black Hills of South Dakota over a three year period. Work involved monitoring impact areas, control sites, a reclamation site, and a mitigation project. Also conducted a similar three year project at the Homestake's proposed tailings recovery project along Whitewood Creek. All field surveys were summarized in reports as part of the mine permitting process.

American Colloid. Conducted a ferruginous hawk nest survey of the Thompson Creek drainage near Alzada, MT to monitor bentonite mining impacts to this species.

Rohn Consulting. Conducted surveys for sage and sharp-tailed grouse, and raptors at a site proposed for coal bed methane gas development near Decker, MT.

Other pre-mine wildlife monitoring projects conducted for **Chadwick and Associates** include an oil shale project in eastern Kentucky, several bentonite mine sites in Wyoming, uranium mine sites in Wyoming and Colorado, and coal mine sites in Wyoming.

Breeding Bird and Raptor Surveys:

South Dakota Game Fish and Parks. Conducted a survey for northern goshawks, boreal owls, flammulated owls, and other raptors in the Black Hills. This project is now in its 7th year and is focused primarily on the northern goshawk.

Charles M. Russell NWR. Conducted a survey for breeding birds along two drainages with differing levels of livestock grazing.

Bureau of Land Management. Conducted a one-year contract surveying the deserts of southern California for relative density and distribution of common ravens. Work involved covering 6,000 miles of vehicle routes monthly, and visiting 25 landfills and 17 sewage ponds twice a month. Special effort was placed on recording raven use of power transmission lines.

Bureau of Land Management. Looked for peregrine falcons and other raptors along the Missouri River from Coal Banks to Judith Landing prior to the reintroduction of peregrines to this area.

The Nature Conservancy. Conducted a survey of the Nature Conservancy's Matador Ranch in north-central Montana for sage grouse leks, mountain plovers, burrowing owls, and other raptors. Also located and mapped prairie dog colonies.

US Forest Service/South Dakota Game Fish and Parks. Conducted golden eagle ferruginous hawk and prairie falcon surveys on the Little Missouri National Grassland. Conducted a raptor survey, burrowing owl survey and Baird's sparrow/Sprague's pipit survey on the Grand River National Grassland. Conducted an aerial survey for golden eagles and other raptors in northwestern South Dakota.

South Dakota Game Fish and Parks. Conducted an aerial survey of northwestern SD for golden eagle nests and other raptors of interest.

South Dakota Game Fish and Parks. Conducted a survey for burrowing owls on prairie dog colonies on the Grand River National Grassland in 2001 and 2005.

USDA Forest Service. Conducted a sharp-tailed grouse lek surveys on the Little Missouri National Grassland, ND in 2005 and 2009.

Expert Witness: Provided a coalition of sportsman's groups and environmental groups with expert witness concerning wildlife issues on an appeal of the Deerlodge National Forest Final Forest Plan. Later, we participated in a negotiated settlement of the Forest Plan.

Sierra Club Legal Defense Fund, Inc. Provided information on prairie dog control in EPA hearings on the use of strychnine for the control of prairie dogs.

National Wildlife Federation. Provided advice and assessments on various projects of interest to the NWF.

Writing and/or Reviewing Technical Papers:

MT. Coop. Wildl. Res. Unit. Critically reviewed professional papers by foreign authors, edited and wrote chapters in a book on pronghorns, and designed a study proposal to evaluate wolf depredation on livestock.

Montana Dept. Fish, Wildlife and Parks. Prepared a report on swift fox taxonomy and ecology, and a bibliography of literature on swift and kit foxes.

U.S. Forest Service. Prepared an extensive document and bibliography on presettlement wildlife and habitat of Montana and adjacent areas.

U.S. Forest Service. Prepared a summary of prairie dog management for the Custer Forest with special reference to the Little Missouri and Grand River National Grasslands.

AFSEEE. Wrote a critique of Forest Service Region 1 range management and wildlife management programs.

CHEC. Wrote a critique of the Butte District BLM range management program and contributed to the Range Reform issue of the Different Drummer magazine.

Defenders of Wildlife. Prepared a black-tailed prairie dog status report for the central and northern Great Plains. Provided the US FWS an updated report in 1998.

CHEC. Prepared a status report on the bull trout for publication in the Different Drummer magazine.

Charles M. Russell NWR. Prepared a detailed report evaluating CMR riparian habitat and livestock grazing practices in relation to bird and small mammal populations.

Endangered Species Surveys: **BioWest Inc.** (subcontract). Conducted surveys along proposed pipeline right-of-ways for the San Joaquin kit fox, giant kangaroo rat, blunt-nosed leopard lizard, and two species of ground squirrels in the Mojave Desert and San Joaquin Valley, California. Also conducted surveys for the Utah prairie dog along the pipeline ROWs in Utah. Information from these surveys was summarized in a Biological Assessment.

Furbearer Survey: **Bureau of Indian Affairs.** Conducted furbearer surveys of Flathead Lake and River on the **Flathead Indian Reservation**, Montana.

Wildlife Guide Service: Waterhen Film Productions. Provided a contract photographer for the BBC with advice and assistance in locating and filming mountain plovers and other wildlife on the Charles M. Russell National Wildlife Refuge.

Bison Restoration: **Fort Belknap Indian Reservation.** Wrote a bison management plan and helped present the information to the Tribal Council. Conducted a workshop on bison ecology and management at the Fort Belknap Indian Reservation. Wrote a bison quarantine plan for the Reservation to provide a non-lethal exit for migrating Yellowstone Park bison. Wrote a bison management plan for the **Fort Peck Tribes.**

FaunaWest Project. Organized and conducted a meeting on bison reintroduction in Montana. Based on this meeting, developed a paper on suitability of Montana wildlands for bison reintroduction. This paper was submitted to Montana Fish, Wildlife and Parks as a proposal for FWP to develop an EIS on reintroduction of bison into four areas of Montana.

FaunaWest Project. Own and manage a small bison herd for observational purposes.

Swift Fox Reintroduction: **Defenders of Wildlife/Blackfeet Reservation.** Conducted a pre-release site assessment for swift fox reintroduction on the **Blackfeet Indian Reservation** and assisted in releasing the foxes. Also conducted a post release survey for foxes on the **Reservation.** Worked with the **Dakota Zoo** and **Cochrane Ecological Institute** to transport surplus swift foxes to the CEI. Currently working with several regional zoos to develop captive breeding programs for swift fox reintroductions on Reservations. Conducted swift fox habitat assessments for potential reintroduction of foxes on the Fort Peck, Fort Belknap and Northern Cheyenne Reservations.

Montana Fish, Wildlife and Parks. Conducted a standardized track and scat survey for swift foxes in north-central, northeastern, and southeastern Montana counties.

NEPA PROJECTS: **Redlodge Mountain Ski Area/Custer National Forest.** Wrote the wildlife and botanical resources section of a Custer National Forest EIS for expansion of the Redlodge Mountain Ski Area. This work included field surveys for specific wildlife and plant species.

Terracon, Inc. Wrote two Environmental Assessments for land exchanges in the Las Vegas Valley. The land exchanges were between private developers and the BLM, and involved a Federally listed threatened wildlife species.

Custer National Forest. Provided assistance to the Custer National Forest, Ashland Ranger District on impact analysis and writing the wildlife resources section for a timber sale EA.

ORB Engineering, Inc. Conducted field surveys and wrote the plant and wildlife resources section of an EA for a FAA regional radar station near Great Falls, MT. Waterfowl flight paths were a major issue for this EA.

Morrison and Maierle, Inc. Conducted field surveys for wildlife resources and wrote the wildlife sections for Environmental Assessments at proposed airport sites at Malta and Hardin, MT.

Maxim Technologies, Inc. Conducted site inspections of over 30 proposed game farms or existing game farms with proposed expansion projects. Information gathered during the site inspections and from agency interviews was used to write the wildlife sections of Environmental Assessments and one Environmental Impact Statement. These documents were prepared for Montana Fish, Wildlife and Parks. In addition, I attended public meetings for two game farms and several meetings with FWP and DOL. Wrote the wildlife section of a game bird farm/shooting preserve EIS. This work was based on visits to several game bird farms and shooting preserves, agency interviews, and a literature review. This document was prepared for Montana Fish, Wildlife and Parks. Conducted field surveys for wildlife resources along a 20 mile proposed gas pipeline route in north-central Montana and wrote the wildlife section for the EA addressing impacts of the proposed project.

Montana Dept. of Military Affairs. Wrote an EA describing the management alternatives for black-tailed prairie dogs located at Fort Harrison, MT.

Vegetation Survey: **U.S. Forest Service,** Missoula Forest Research Center. Conducted a habitat analysis of sites used by radio-marked elk along a BPA power line route in western Montana.

INTERNATIONAL PROJECTS

Wildlife Training Seminar:

U.S. Fish and Wildlife Service. Participated in a US FWS sponsored wildlife conservation training program for Pakistani government wildlife biologists. Following the one month seminar, two months were spent traveling through Pakistan visiting and advising on various wildlife projects, and providing assistance in setting up new research studies. After leaving Pakistan, 3 months were spent traveling through Nepal, Burma, and Thailand, visiting other wildlife biologists and Parks.

Bird and Mammal Collections:

MT. Cooperative Wildlife Research Unit. Collected Montana birds and mammals and prepared them as museum specimens for a collection sent to the Northwest Plateau Institute of Biology in Qinghai, China.

University of Montana Mammalogy Museum: Collected small mammals in both the mountains and jungles of southern Peru and prepared them as museum specimens for the University of Montana collection.

Peruvian Spectacled Bear Study: **New York Zoological Society.** Assisted on an ecological study of the spectacled bear in the Andes of southern Peru for 6 months.

AMANDA SCHEIB

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EDUCATIONAL BACKGROUND

Master of Secondary Education, Science Concentration, 2003

University of Tennessee, Knoxville, TN

30 Semester Hours

Advisor: Dr. Claudia Melear (865) 637-9174

Bachelor of Science in Biology 2000

Lee University, Cleveland, TN

148 Semester Hours

CAREER EXPERIENCE

Desert Tortoise Biologist

Kiva Biological Consulting

P.O. Box 1210, Inyokern, CA 93527

Owner: Peter Woodman

June 2008 – Present

- Crew lead in field.
- Responsible for daily downloading of data from gps units, pdas, and cameras.
- Submitted weekly reports of all field data.
- Radio track desert tortoises.
- Perform health assessments on desert tortoises.
- Place temporary and permanent transmitters on tortoises.
- Remove transmitters from tortoises.
- Perform field surveys to locate desert tortoises.

Desert Tortoise Biologist

Kemp Anderson Consulting

324 ½ 15th Street, Seal Beach, CA 90740

March 2008 – June 2008

- Radio tracked desert tortoises.
- Performed health assessments on desert tortoise.
- Relocated animals from home domicile to a new domicile.
- Recorded daily records of activities.

Scientific Aid

California Department of Fish and Game

830 "S" Street, Sacramento, CA 95814

Supervisor: Judy Urrutia

August 2007 – March 2008

- Used standard protocol to sample Owens River watershed for New Zealand Mud Snail.
- Evaluated and recorded riverine habitat type.
- Examined water samples using a standard protocol for New Zealand Mud Snail.
- Reviewed and verified accuracy of field data.
- Entered field data into an excel program.
- Prepared preliminary reports summarizing survey findings.

- Operated a government vehicle.
- Used GPS and conductivity meter to collect locality data.
- Maintained equipment in serviceable condition.
- Worked with a partner and independently to complete field and lab work.
- Trained personnel on sampling protocol.

Desert Tortoise Biologist

Kiva Biological Consulting

P.O. Box 1210, Inyokern, CA 93527

Owner: Peter Woodman

March – May 2007

- Conducted 600 hours of field surveys for the federally threatened desert tortoise.
- Employed Fish and Wildlife protocol to conduct surveys.
- Worked closely with a group of 5 other biologist while conducting field surveys.
- Entered data collected into a PDA.
- Placed temporary transmitters on tortoises.
- Participated in reconciling written and electronic data collected on tortoises.
- Operated a 4-wheel drive vehicle.
- Hiked over rugged terrain.

High School Biology Teacher

Fiorella H. LaGuardia High School of Music and Art and Performing Arts

100 Amsterdam Avenue, New York, New York 10023

Supervisor: Dr. Simon Fenster

September 2003 - January 2007

- Successfully integrated the arts into Living Environment curriculum and labs.
- Planned, prepared, and organized Living Environment curriculum for students at all levels and abilities.
- Efficiently completed Living Environment state mandated labs.
- Evaluated student progress by using various assessment instruments including pretest, rubrics, constructed responses, and skill based task.
- Coordinated after school make up lab program for Living Environment and Chemistry.
- Encouraged students to take responsibility for their learning.
- Incorporated technology into the science classroom.
- Helped match students with science mentors.
- Served as science club sponsor.

RESEARCH EXPERIENCE

Research Assistant, Lee University 1999 - 2000

Advisor: Dr. Erik Lindquist

Impact of water quality on salamander biodiversity and abundance along an upland stream site in the Great Smoky Mountains.

Duties:

- Hiked into remote study plots in the Great Smoky Mountains.
- Participated in the experimental design process and set up of materials in aquatic and terrestrial study plots to aid in collection of salamanders.
- Conducted field sampling of a variety of aquatic and terrestrial salamanders using a standardized protocol.

- Collected DNA samples from all captured salamanders.
- Responsible for entering data into an excel database.

Research Assistant, Lee University 1998 – 1999

Correlations of habitat vitality on amphibian diversity and abundance in tropical cloud forests (Panama).

Duties:

- Designed an experiment examining water quality of three different streams in Panama.
- Hiked into remote study sites throughout the country of Panama.
- Collected and Analyzed water samples onsite using a handheld spectrophotometer.
- Collected water samples to bring back to lab for further testing.
- Analyzed data by looking for trends in water quality over a period of time.

TRAINING

January 2008 Completed Environmental Inspector training at Natural Resource Group in Minneapolis, MN

Myles Brett Traphagen

August 13, 1967

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San Diego, CA 92106
(520) 991-6368
mbtrap@gmail.com

Education

- **B.S. Environmental Studies/Natural History & Wildland Conservation-** University of California, Santa Cruz, 1995.
- **2009 Desert Tortoise Handling Workshop** Ridgecrest, CA.
- **2010 Flat tailed horned lizard training workshop-San Luis Rio Colorado, Sonora, Mexico.**
- **FAA Certified Private Pilot, Part 141.**

Current Employer

Turn of the Century Restoration & Monitoring Inc.- August 1998 to present.

Position: Director

Independent consulting corporation established in 1998 to perform vegetation monitoring, research and ecological inventory in Arizona/New Mexico Borderlands area. Regular clients and partnerships include The Malpai Borderlands Group, Ted Turner Ranch Properties Inc., Turner Endangered Species Fund, The Nature Conservancy, Arid Lands Project, U.S. Forest Service, , and U.S. Fish & Wildlife Service. Principle duties include hiring, training and supervising field crews to collect vegetation monitoring and research data, negotiating contracts and coordinating projects, analyzing data, developing statistically reliable monitoring methods for the specific resource being measured, writing annual project reports, presenting results to peer groups at conferences. Over the last three years I have performed approximately 240 days of desert tortoise surveys in the Mojave desert.

Summary of recent work and training history

- Authorized biologist for Brightsource Energy-Ivanpah Solar Electric Generating Station, Oct-Nov 2010.
 - Construction monitoring, burrow excavation, clearance survey crew leader. Authorized desert tortoise handler.
- Attended Interagency Coordinating and Management Oversight Group for Flat Tailed Horned Lizard Training Workshop in San Luis Rio Colorado, Sonora, Mexico on September 10-11, 2010.
- Desert Tortoise Handling Workshop in Ridgecrest, CA on November 7-8, 2009.
- Subcontractor for URS Corporation
 - Performed desert tortoise (*Gopherus agassizii*) presence/absence surveys at the proposed Calico solar site east of Barstow.
 - Performed botanical surveys on proposed Calico solar site east of Barstow.
- Subcontractor for Sundance Biology
 - Performed desert tortoise (*Gopherus agassizii*) presence/absence surveys in the Mojave desert for proposed alternative energy projects.
 - Compiled plant and animal lists on survey sites.
 - Developed protocols for vegetation monitoring on Mojave desert research and mitigation sites.
- Subcontractor for Phoenix and Helix Environmental Consulting Nov-2010 January -2011.
 - Monitored fiber optic cable installation in Imperial County, CA to ensure compliance with Endangered Species Act in BLM Critical Habitat. Species of concern: Desert tortoise and burrowing owl.
- Vegetation Monitoring Director for Malpai Borderlands Group
 - Director of vegetation monitoring of 1 million acres of the Malpai Borderlands region. Specific duties include monitoring of prescribed burns, rangeland restoration and evaluation of previous monitoring and research over last 15 years in borderlands region of Arizona and New Mexico and mapping and archiving of data.
- Biologist for Ted Turner Ranches.
 - From 1999 to 2008 coordinated rangeland monitoring program for Ted Turner evaluating effects of bison grazing on 1 million acres of land restored with bison in New Mexico, Nebraska and South Dakota.
 - Responsible for reintroduction of Bolson tortoise (*Gopherus flavomarginatus*) to New Mexico, a CITES I Appendix A Endangered Species.
- Northwest Mexico Desert Tortoise Project Sonora, Mexico- August 2010
 - Located tortoises for conducting genetic studies and health assessments. Assisted in drawing blood and collecting nasal lavage samples. Handled and conducted health assessment on 4 tortoises.

- Grant recipient by New Mexico Game & Fish Department in 2009 to document status of white-sided jackrabbit (*Lepus callotis*) in the Chihuahuan desert, a species currently proposed for USFWS endangered listing.

Previous Employment History

Phoenix and Helix Environmental Consulting-Nov 2010 to January 2011.

Supervisor: Ryan Young (949) 887-0859

- Monitored fiber optic cable installation in Imperial County, CA for QWEST Communications to ensure compliance with Endangered Species Act in BLM Critical Habitat. Species of concern: Desert tortoise and burrowing owl.

Sundance Biology-Oct-Nov 2010. Authorized biologist for Brightsource Energy-Ivanpah Solar Electric Generating Station, Oct-Nov 2010.

- Construction monitoring, burrow excavation, clearance survey crew leader. Authorized desert tortoise handler.

URS Corporation- April-June 2010

Supervisor: Theresa Miller (619) 294-9400.

- Performed desert tortoise (*Gopherus agassizii*) presence/absence surveys at the proposed Calico solar site east of Barstow.
- Performed botanical surveys on Calico site. Contact Bill Boarman (619) 861-9450 for plant reference on Calico.

Sundance Biology-April-July 2008, April-October 2009

Supervisor: Mercy Vaughn (928) 380-5507.

- Performed desert tortoise (*Gopherus agassizii*) presence/absence surveys in the Mojave desert for proposed alternative energy projects, including Brightsource Ivanpah Solar Electric Generating station.
- Compiled plant and animal lists on survey sites.
- Developed protocols for vegetation monitoring on Mojave research and mitigation sites.

Turner Endangered Species Fund-January 2005-October 2007

Supervisor: Mike Phillips (406) 556-8500

Bolson Tortoise Reintroduction Project- Biologist responsible for reintroduction of Bolson tortoise (*Gopherus flavomarginatus*) to New Mexico, a CITES I Appendix A Endangered Species.

Supervisor: Dr. Joe Truett (retired)- Turner Endangered Species Fund.

- Surveyed habitat of native Chihuahuan Desert in Mexico to assess habitat suitability for Bolson tortoise re-introduction to New Mexico.
- Coordinated health and disease team to assess health, DNA and disease condition of 30 translocated tortoises from Arizona to New Mexico.
- Coordinated and performed 400 mile translocation from Arizona to New Mexico.
- Established breeding program for Bolson tortoise in New Mexico.
- Collected blood and nasal lavage samples for genetic and disease testing.
- Pit tagged tortoises using subcutaneous and epoxy methods.

Presentations

- “*Translocation of the Bolson Tortoise (Gopherus flavomarginatus) to its Pre-Historic Range.*” Desert Tortoise Council Symposium 2007, Las Vegas, Nevada. February 23-27, 2007.
- “*Reintroducing the Bolson Tortoise (Gopherus flavomarginatus) Into Its Former Range.*” Turtle Survival Alliance 5th Annual Symposium on the Conservation and Biology of Tortoises and Freshwater Turtles – Atlanta, Georgia, July 25-28, 2007.
- “*Bolson Tortoise: Past, Present and Future.*” Desert Tortoise Council Symposium 2009. Poster presentation. February 19-22, 2009, Henderson, Nevada.
- “*Drought Effects on Black Grama at McKinney Flats Research Site.*” Malpai Borderlands Group Science Conference 2004. January 3, 2004. Douglas, Arizona.
- “*A Decade of Vegetation Monitoring, Research and Inventory in the Malpai Borderlands.*” Malpai Borderlands Group Science Conference 2005. January 10, 2005. Douglas, Arizona.
- “*Grazing & Fire Effects on Perennial Grasses at the Diamond A Ranch McKinney Flat Research Site.*” Malpai Borderlands Group Science Conference 2008. January 9, 2008. Douglas, Arizona.
- “*The White Sided Jackrabbit (Lepus callotis) in the Animas Valley: An Important Refugia for a Threatened Species Under Threat.*” Malpai Borderlands Group Science Conference 2009. January 6-7, 2009. Douglas, Arizona.
- “*A Summary Examination of 15 Years of Monitoring Data in the Malpai Borderlands.*” Malpai Borderlands Group Science Conference 2010. January 5-6, 2010. Douglas, Arizona.

Papers and Publications

- “*Re-Wilding a Giant American Reptile.*” Wildlife Conservation. October, 2007.
- “*Response of Perennial Grasses to Fire, Grazing and Weather at the McKinney Flats Research Site.*” Traphagen, M. B., A. N. Facka & C. G. Curtin. 2008. Desert Plants Vol. 24 (2).
- “*Restoration of the Bolson Tortoise (Gopherus flavomarginatus) to North America.*” Turtle Survival Alliance Annual Publication- 2007. with Dr. Ross Kiester and Dr. Jim Juvik. Turtle Survival Alliance Annual Magazine- June 2007.
- “*Natural History of Cochise County.*” 12 part weekly natural history series for Douglas Daily Dispatch. June-September, 2000.
- “*Birds of Southeast Arizona.*” Southeast Arizona magazine. September 2000.

Marcella Waggoner

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Education:

2006. M.S., Landscape Design/Land Use Planning; Conway School of Landscape Design, Conway, MA

2002. Certificate, Geographic Information Systems; University of California Riverside, Extension, Riverside, CA

1984. M.A., Education; University of California Riverside, Riverside, CA

1976. B.A., Biology; University of California Riverside, Riverside, CA

Work Experience:

March 2009-Present. U.S. Geological Service, Riverside, CA. Biological Science Technician

Desert tortoise research: collected, organized and analyzed data, conducted radio tracking of tortoises. Conducted health evaluations including drawing blood (subcarapacial) and nasal lavage. Identified tortoise sign, predator sign and tortoise food plants. Kept accurate field notes. Completed tortoise "bite count" surveys. Organized lab and field equipment. Ordered supplies for office and field projects. Conducted quality control on large database of tortoise health information. Provided input for workshop training of field crews doing health evaluations. Helped train field workers in blood draw techniques.

July 2008-October 2008. Temporary Position. Bureau of Land Management, Fairbanks, Alaska. Outdoor Recreation Planner

Conducted trail assessments, monitoring and maintenance of wayside rest stops, prepared visitor use report data (for RMiS -the BLM recreation database), and completed a sign inventory report.

March 2007-April 2008. Dudek Environmental Engineering, Encinitas, CA. Habitat Restoration Specialist

Conducted biological monitoring of restoration projects, construction monitoring, habitat assessment for damage mitigation (pipe line spills), prepared conceptual plans, prepared scope of work and cost estimates, prepared planting plans and made site observation reports, completed general botanical surveys, vegetation transects and rare plant surveys.

May 2004-June 2005. USDA Forest Service-Pacific Southwest Forest Experiment Station, Riverside, CA. Biological Science Technician

Collected, organized and analyzed field data, completed vegetation transects, and produced GIS maps.

1985-2004. Entomology Department, University of California, Riverside.
Biologist/Research Associate

Organized and carried out scientific research for entomology lab and field projects, wrote reports, supervised staff. List of professional publications and presentations is attached.

Biological Resources Experience

Birds:

- Served as a volunteer biology researcher for the North Slope Bird Habitat Study with U. S. Fish Wildlife Service, Alaska: living in a remote field station for on the arctic coastal plane for three months -walking up to 10 miles a day across ice and bogs.
- Completed Cornell University bird behavior class and multiple field classes through San Bernardino County Museum/Audubon Society

Insects:

- Completed ant surveys on Least Tern nesting sites -coastal so. CA 2001
- Taught extension classes in Natural History of Desert Insects for UCR and Cal. State University
- Inventoried, identified, and photographed desert insects

Tortoises:

- Completed tortoise health evaluations and tracking in the Mohave Desert in all seasons: walking up to 10 miles a day across steep rocky terrain -often in extreme temperatures.
- Permitted for: capturing, releasing, handling, conducting health evaluations, drawing blood, collecting nasal lavage samples, changing radio transmitters, salvaging dying tortoises, collecting shell skeletal remains
- Hold USFWS recovery permits for Desert Tortoise (*Gopherus agassizii*)
TE-102235-4, TE006556-15, TE006556-14 and state fish and game permit SC-10893 (through 2012)

Plants:

- California Native Grass Society Workshop Identifying and Appreciating the Native and Naturalized Grasses of California (2005 – 2 days)
- Completed docent training and conducted tours at UCR's Botanic Garden
- Conducted plant transects and vegetation mapping 2004-2005 while employed by US Forest Service. Work was conducted in the following habitats: pinyon-juniper forest, Douglas fir , ponderosa pine, aspen, great basin sage, coastal sage scrub, Sonoran desert
- Analyzed habitat for damage due to ineffective erosion control, heavy equipment use, broken water lines, pipeline replacement, and unauthorized encroachment (2007)
- Developed damage reports (from above analysis) and prepared restoration plans

Computer Experience and Skills:

AutoCAD, InDesign, Illustrator, Photoshop, ArcGIS (including 3D Analyst and Spatial Analyst), ArcView 3.2, Microsoft Word, Excel, Quicken, PowerPoint, Endnotes, Procite, SigmaStat

Geographic Information Systems (GIS) and mapping skills:

- Training & certificate in Geographic Information Systems (GIS)
- ArcGIS, ArcView3.2, (also 3D Analyst and Spatial Analyst)
- Collecting data using Global Positioning System units & data loggers
- Using GIS and GPS technology to collect and enter and retrieve data for entomological, wildlife ecology studies and land use planning
- Using GPS to delineate different habitat types and management areas, map trails and boundaries
- Editing & maintaining GIS maps, data and related paperwork
- Reading and interpreting recorded tract maps, parcel maps, official maps, grant deeds, lot line adjustments and easements

Professional Conferences and Workshops

LEED – NC Technical Review Workshop – 2006: Irwindale, CA

P-REX 2 Mine restoration – 2006: Harvard School of Design

Reading the Landscape: Landscape Design as Ecological Art with Darrel Morrison, FASLA – 2005: Conway School of Design

California Native Grass Society Workshop Identifying Native & Naturalized Grasses of California 2005

Natural Surface Trails Workshop with Troy Scott Parker – 2005

Universal Trail Assessment Program Beneficial Designs – 2005 Reno, NV Trailbuilders Conference