

James L. Boone

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WORK SUMMARY; summary of qualifications

I have been involved in basic and applied environmental research since 1975, and in 1995 I earned a Ph.D. in ecology. My experience includes planning and conducting plant and wildlife field surveys, designing experiments, collecting data, performing advanced statistical and computational procedures using a variety of computer programs and platforms, database management, preparing technical reports, and publishing in scientific journals. Since 2006, I have run an environmental consulting firm focusing on locating and monitoring sensitive plant and animal species. I also run a website (birdandhike.com) about flora, fauna, geology, and recreation in the Mojave Desert. In the old days, I worked in wildland fire fighting, law enforcement, search and rescue, and emergency medicine.

EDUCATION

Ph.D., ECOLOGY, 1995. University of Georgia, Athens.

Population genetics, systematics, conservation, ecology, applied mathematics.

Dissertation: *Patterns of Temporal and Geographic Variation in the Genetics and Morphology of Cotton Mice (Peromyscus gossypinus)*.

M.S., FOREST RESOURCES, 1990. University of Georgia, Athens.

Population genetics, conservation, wildlife management, land use planning.

Thesis: *Reassessment of the Taxonomic Status of the Cotton Mouse (Peromyscus gossypinus anastasae) on Cumberland Island, Georgia, and the Implications of this Information for Conservation*.

B.S., WILDLIFE MANAGEMENT, 1986. Humboldt State University, Arcata, CA.

Wildlife management, biostatistics, botany, computers. Graduated summa cum laude.

Senior Thesis: *Morphological Differences between Populations of Deer Mice (Peromyscus maniculatus rubidus) in Sand Dune and Upland Habitats*.

PRIMARY RESEARCH PROJECTS

- * Response of Mojave Desert vegetation to wildfire.
- * Modeling the movement of radioactive materials on a subsistence farm.
- * Ecology of mammals and reptiles at Yucca Mountain.
- * Impacts of human activities on mammals and reptiles at Yucca Mountain.
- * Small-scale genetic change (geographic and temporal) among rodent populations.
- * Subspecific taxonomy of *Peromyscus gossypinus*.
- * Vertebrate community ecology in the southern Appalachian Mountains.
- * Distribution of Lyme disease in the southeastern U.S.
- * Wading birds at Cumberland Island National Seashore.
- * Control of invasive salt marsh plants without herbicides.
- * Effects of fire on small mammal populations.
- * Foraging behavior of White-headed Woodpeckers.
- * Black bear research and management.

SELECTED PUBLICATIONS

Boone, J.L. 2011. Birding, Hiking, and Naturalizing Around Las Vegas. www.birdandhike.com

Boone, J. L. 2011. Annotated List of Animal Species Observed In and Adjacent to the Mojave Desert Portion of Grand Canyon -- Parashant National Monument. Desert Wildlife Consultants, LLC, Las Vegas, 43 pp.

Rautenstrauch, K. R., D. L. Rakestraw, G. A. Brown, J. L. Boone, and P. E. Lederle. 2002. Patterns of Burrow Use by Desert Tortoises (*Gopherus agassizii*) in Southcentral Nevada. *Chelonian Conservation and Biology*, 4(2):398-405.

Walters, J.P., and J.L. Boone. 2002. Effects of Salinity and Sodidity on Vegetation Used for Strip Mine Reclamation in Webb County, Texas. Farco Mining, Laredo, Texas, 33 pp. plus Appendices.

Boone, J. L., and E. A. Holt. 2001. Field Sexing Young Free-ranging Desert Tortoises (*Gopherus agassizii*) Using External Morphology. *Chelonian Conservation and Biology*, 4(1):28-33.

Boone, J. L., J. Laerm, and M. H. Smith. 1999. Allozyme Variation in the Cotton Mouse (*Peromyscus gossypinus*). *Journal of Mammalogy*, 80:833-844.

Boone, J. L. 1998. Indirect Impacts of Site Characterization Activities on Small Mammal Populations in the Larrea-Lycium-Grayia Vegetation Association at Yucca Mountain, Nevada: 1991-1997. CRWMS M&O, B00000000-01717-5705-00102.

Lederle, P. E., M. C. Nelson, and J. L. Boone. 1997. A simple, Inexpensive, and Versatile Research Blind. *North American Bird Bander*, 22:18-21.

Laerm, J., W. M. Ford, M. A. Menzel, T. S. McKay, J. L. Boone, and T. Pig. 1996. Symposium on Appalachian Biodiversity: Soricid Communities in the Southern Appalachians. Virginia Museum of Natural History, Blackburg.

Laerm, J., and J. L. Boone. 1995. Corrections of Records of Occurrence of *Peromyscus polionotus* (Wagner) and *P. gossypinus* (LeConte) (Rodentia: Muridae) in the Blue Ridge Province of Georgia. *Brimleyana*, 22:9-14.

Boone, J. L., and R. G. Wiegert. 1994. Modeling Deer Herd Management: Sterilization is a Viable Option. *Ecological Modeling*, 72:175-186.

Boone, J. L., J. Laerm, and M. H. Smith. 1993. Taxonomic Status of the Anastasia Island Cotton Mouse (*Peromyscus gossypinus anastasiae*). *Journal of Mammalogy*, 74: 363-375.

Weed, J., and J. L. Boone. 1992. A Macintosh Computer System for Collecting and Analyzing Rodent Sexual Behavior. *Physiology and Behavior*, 52: 183-184.

Magnarelli, L. A., J. H. Oliver, H. J. Hutcheson, J. L. Boone, and J. F. Anderson. 1992. Antibodies to *Borrelia burgdorferi* in Rodents in the Eastern and Southern United States. *Journal of Clinical Microbiology*, 30: 1449-1452.

Boone, J. L., E. Furbish, K. Turner, and S. P. Bratton. 1988. Clear Plastic. A Non-Chemical Herbicide. *Restoration and Management Notes*, 6:94-95.

WORK EXPERIENCE

Desert Ecologist

Desert Wildlife Consultants, LLC; Las Vegas, Nevada (2000 to present)

Started and operated a business doing consulting work for county, state, and federal agencies, mining companies, industrial firms, and individuals, focusing primarily on sensitive species (e.g., desert tortoise, rare plants) associated with construction sites and other land disturbing activities on federal lands in the Mojave Desert.

I also developed a website (birdandhike.com) about the ecology of the Mojave Desert (flora, fauna, and geology) by providing information on things to do and places to go in the desert around Las Vegas (e.g., hiking, birding, four-wheeling, and other outdoor activities). During this time, I became proficient in GPS and mapping, drove four-wheel drive vehicles to remote locations, and lived and worked under extreme environmental conditions alone and with small groups for extended periods of time. I collected data, organized information, and published results. My formal education focused on vertebrate ecology and wildlife management, but during this time I studied botany and geology to expand the breadth of my understanding of the Mojave Desert ecosystem.

Field Botanist (4/2006 to 5/2006)

USGS, Western Ecological Research Center, Henderson, Nevada

Temporary position. I set up study plots and measured vegetation in middle-elevation Mojave Desert habitats as part of a study evaluating the response of plants to fire. Responsible for identifying annual and perennial plants to species, counting plants in quadrats, and measuring plant heights along transect lines. Worked with small crews and lived in field camps.

Technical Writer II (1999 to 2006)

SAIC (4/1999 to 2/2001)

Bechtel-SAIC, Las Vegas, Nevada

Responsible for writing, editing, compiling, and assisting in the production of scientific technical reports (mostly hydrology and geology), engineering reports (e.g., system description documents, facility description documents, and specifications) for the Yucca Mountain Project. Rewrote technical material to levels appropriate for intended audiences (e.g., rewriting technical jargon and conceptually challenging material using words and writing styles that made the resulting text understandable by the general public). Compiled information from original sources and numerous project authors, developed reference lists and data tracking databases, and produced graphics. Worked with authors and reviewers to resolve technical issues and clarify material. Ensured consistency and professional quality. Worked independently and in groups while leveraging knowledge of computer systems to speed the work while reducing the workload and the cost of doing business. Note: In 2001, management of the Yucca Mountain Project changed from SAIC to Bechtel-SAIC.

Animal Ecologist (Senior Scientist) (1995 to 1999)

EG&G/Energy Measurements (4/1995 to 9/1995)

SAIC, Las Vegas, Nevada (9/1995 to 4/1999)

Responsible for conducting long-term impact assessment and ecological research for the Yucca Mountain Project. Engaged in mark-recapture studies of rodent and reptile community dynamics. Curated faunal collections. Supervised scientists in the field and office. Reviewed and edited technical and other documents. Managed data. Manipulated databases including

GPS and GIS data (ArcView). Performed statistical analyses. Authored technical reports and peer-reviewed journal articles. Worked on teams composed of people from a variety of scientific, technical, and non-technical backgrounds in contributing to environmental impact statements. Lead efforts of the ecology team to model the movement of radioactive materials through a desert agroecosystem. My last year in this position was spent analyzing data and writing reports for other environmental scientists, primarily those in the environmental restoration and botanical research groups. By early 1999, all of the environmental research staff had been laid off, and I transferred to a technical writing position. Note: In 1995, management of environmental research on the Yucca Mountain Project changed from EG&G to SAIC.

Manager of Mammal Collections (Research Associate)
Nevada State Museum, Las Vegas, Nevada (1997 to 2001)

Responsible for curating the mammal collection: organized, updated, and maintained the collection of more than 8,000 specimens. Maintained and updated and the computerized collection catalog. Cleaned and prepared specimens. Reviewed, investigated, and updated historical collection records. Provided reports on holdings.

Graduate Student (Teaching Assistant)

University of Georgia, Institute of Ecology and Museum of Natural History, Athens, GA (1990-1995)

Taught labs for Comparative Anatomy, Mammalogy, Vertebrate Natural History, Ecology, and non-majors Biology. Prepared and delivered lectures in classroom and laboratory settings, made and gave exams, and maintained grade lists. Presented guest and substitute lectures in several classes. Organized and trained new teaching assistants. During this time, I conducted my independent dissertation research on the population genetics and morphology of Cotton Mice (*Peromyscus gossypinus*). I also helped other graduate students characterize vegetation in the north Georgia and North Carolina mountains (count and measure trees, record data on understory plants, coarse woody debris, and physical conditions), study of the distribution of Lyme disease in the Southeast, inventory amphibians and bats in north Georgia, and inventory shrews in North Carolina.

Macintosh Computer Consultant

MacRescue, Athens, GA (1988-1995)

Operated my own computer consulting business. Assisted individuals and institutions in developing Macintosh computer skills and making purchasing decisions. Performed hardware and software maintenance. Taught non-credit courses through the university continuing education program.

Graduate Student (Research Assistant)

University of Georgia, School of Forest Resources, Athens, GA (1987-1989)

Conducted and published independent and directed research projects mostly dealing with small mammals. Analyzed the data and published reports from the floral and faunal studies that I collected in the Georgia and North Carolina coastal marshes during 1987.

Biological Technician

University of Georgia Institute of Ecology, and National Park Service. 1987.

Designed and implemented field studies concerning small mammals, migrant birds, prescribed fire, and invasive plants in coastal barrier-island marsh communities. In Georgia, studies focused on the effects of disturbance and potential beach erosion on ducks and wading birds along an intercoastal waterway (Cumberland Island). In North Carolina, studies focused on small mammals, birds, and invasive plant species in barrier-island sand dune and salt marsh communities (Cape Hatteras). Evaluated several methods to control invasive plants, including fire, mechanical removal (chainsaws), hand removal (hand tools), and covering with clear plastic. We also studied the effects of disturbance in several habitat types on the island. I participated in all of these studies, but for some, I set up, conducted studies, supervised others, collected data, analyzed data, and published the results. I reactivated my Fire Boss card and participated in experimental burns.

Park Ranger

National Park Service. Joshua Tree National Park, Sequoia and Kings Canyon NP, Grand Canyon NP, Lake Mead National Recreation Area (1978-1986; 12 seasons).

Primarily responsible for emergency response and conflict resolution in law enforcement, emergency medicine, search and rescue, technical rock rescue, structural and wildland fire suppression, ambulance, campground operations, visitor programs (campfire programs and nature walks), backcountry patrol, other technical and non-technical aspects of park management. Supervised employees under technically difficult, life threatening, and stressful situations. Documented activities in written form. Participated in resource management activities such as bear research and management, bird studies, bubonic plague surveys, fire management, and vegetation studies. Details available on request.

Forestry Aid

U.S. Forest Service, Clearwater National Forest, Idaho (1975-1976; 2 seasons)

Worked on timber stand improvement, tree planting, timber cruising, controlled burns, and firefighting crews. Timber cruising involved working in teams of two to inventory timber, identify understory plants, take soil samples, inventory coarse woody debris, and identify forest pathogens. The focus of this work was timber inventory (number, height, DBH, condition, disease) using variable radius plots, but we also collected ecological data for forest fire planning and soils data for soil mapping. Used maps, compasses, and chains to navigate the mountains and locate plots. Lived in remote field camps (drive-in and fly-in) for 10 days at a time. Did seedling survival surveys in replanted clearcuts using fixed radius plots. Worked on a timber stand improvement crew using chainsaws to thin trees in regenerating clearcuts. Selected trees to keep based on species, size, and condition, and cut down the others. Participated in controlled burn to remove debris from clearcuts and fought wild fires. Details available on request.