

SARA ANN MUETING

ADDRESS

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EDUCATION

Doctor of Philosophy. Southern Illinois University Carbondale. 2009-present
Master of Public Health. University of Nevada Las Vegas. 2007-2009.

Thesis title: Substrate Monitoring, Contaminant Monitoring and Public Educational Outreach on Quagga Mussels (*Dreissena bugensis*) in Lake Mead, NV. May 2009. GPA: 3.95.

Bachelor of Science in Biology. Kansas State University. 2003-2007.

Overall GPA: 3.745

GRE aptitude score (Verbal and Quantitative): 1220

RESEARCH EXPERIENCE

Graduate Research Assistant. University of Nevada Las Vegas. June 2007-May 2009. Advisor: Dr. Shawn Gerstenberger.

Experience included: Contaminant analysis (Hg) of rabbit, hare, duck and coyote livers and kidneys and quagga mussel soft tissue using atomic absorption spectrometry on an AMA 254 advanced mercury analyzer and FIMS 100 cold vapor mercury analyzer. Trained two undergraduate students to help with quantization of quagga mussels on substrates.

Lab technician. Kansas State University, Manhattan, KS. January 2005-May 2007. Advisor: Dr. Samantha Wisely.

Experience included: PCR, gel electrophoresis, use of an ABI Prism 3100 genetic analyzer, analyzing genetic data using Genemarker v 1.4, DNA extractions from tissue, blood and hair, development of a microsatellite library from a DNA extraction of muscle tissue, cleaning PCR product using QIAquick purification kit, use of computer program *Sequencher*, analyzing population genetic data using GenePop v3.3 and FSTAT, care and growth of BAC clones, isolating DNA from BAC colonies, Long-range PCR, ordering supplies for lab use, general lab managing, and training other students.

Undergraduate researcher. Kansas State University, Manhattan, KS. January 2007-May 2007. Advisor: Dr. Walter Dodds.

Using Kansas Department of Health and Environment chemistry and biological data for all Kansas freshwater streams and rivers

from 1990- 2003, I concluded that heavy metal concentrations (copper, lead and zinc) have decreased over time in four well monitored sites, two of which were intensely mined for these heavy metals in the past. I also discovered that the Huggins-Moffit macroinvertebrate index (which measures invertebrate species richness) to decrease over time. These two findings may indicate that water quality is improving at these sites.

Lab technician. Kansas State University, Manhattan, KS. August 2004-December 2004. Advisor: Dr. S. Keith Chapes.

Experience included: growth and maintenance of CD81 macrophage cell lines, counting cells using hemocytometer, making buffers and media for general lab use, euthanization and cervical dislocation of mice, bone marrow extractions from mouse humerus, tibia, and femur, homogenization of mice spleens, and general lab maintenance.

FIELD EXPERIENCE

March 2008-March 2009. Monthly trips to Lake Mead to check on quagga mussel substrates.

1 November 2008 and 13 October 2007. At the Overton wildlife management area in Overton, NV, we collected duck livers and gizzards from voluntary hunters. The livers were analyzed for mercury and the gizzards were x-rayed for lead shot.

6-8 October 2008 and 11-12 October 2007. Electrofishing and gill net pulling with Arizona Game and Fish Department during their annual fish survey.

17-21 July 2006. Use of GPS units to map black-tailed prairie dog colonies in Logan County, KS. Received All Terrain Vehicle official training. We quantified the number of prairie dogs in a specific area in Western Kansas to make sure enough are present to support a population of black-footed ferrets. We quantified populations by using GIS systems connected to ATV's.

19-25 March 2006. Capture and release of black-footed ferrets in rural reintroduced Arizona population. Performed electroejaculation, took blood samples, administered vaccines, and measured morphological features of each animal.

TEACHING EXPERIENCE

Spring 2009. University of Nevada Las Vegas. Guest lecturer for Environmental Health graduate level class.

Spring 2007. Kansas State University. Practicum Student for Principles of Biology Class. Duties included: lab preparation, give pre-class lectures and quizzes, and answer questions students have during class period.

PUBLICATIONS

Wisely, SM, RM Santymire, TM Livieri, **SA Mueting**, J Howard. (2008) Genotypic and phenotypic consequences of reintroduction history in the black-footed ferret (*Mustela nigripes*). *Conservation Genetics*. 9(2): 389-399.

GRANTS

Lead graduate student and primary author/researcher. National Park Service. The development of a suitable substrate sampling device for monitoring Quagga Mussels (*Dreissena bugensis*) in Lake Mead, Nevada. January 2008- May 2009. \$14,542.

PRESENTATIONS

Mueting, SA; SL Gerstenberger. 100th Meridian Initiative at Lake Mead 2007-2008. Western Division of American Fisheries Society Meeting. Portland, OR. 5 May 08.

Mueting, SA; SL Gerstenberger. 100th Meridian Initiative at Lake Mead 2007. 100th Meridian Initiative annual meeting. Las Vegas, NV. 28 Nov 07.

Mueting, SA; SL Gerstenberger. Quagga Mussel Team Update. Quagga Team meeting. Henderson, NV. October 2007.

Mueting, SA; M Evans-White; E Banner; WK Dodds. Heavy Metal Concentrations and Benthic Macroinvertebrates Over Time in Kansas Rivers. KSU Division of Biology Undergraduate Research Forum. Manhattan, KS. April 2007. (Poster)

Mueting, SA; SM Wisely; RM Santymire; T Livieri; J Howard. Genetic Diversity Lost and Gained: Conservation Genetics of the Black-footed Ferret.

KSU Graduate Research Forum. Kansas State University. Manhattan, KS. March 2007. *1st place award*

Mueting, SA; SM Wisely; SJ Brown. The microevolution of Interleukin-6 in an immunocompromised species, the black-footed ferret. Kansas Chapter of The Wildlife Society Annual Meeting. Pittsburg State University. Pittsburg, KS. February 2007. (Poster)

Mueting, SA; SM Wisely; SJ Brown. The microevolution of Interleukin-6 in an immunocompromised species, the black-footed ferret. Ecological Genomics Symposium. Kansas City, MO. November 2006. (Poster)

Mueting, SA; SM Wisely; RM Santymire; T Livieri; J Howard. Genetic Diversity Lost and Gained: Conservation Genetics of the Black-footed Ferret. Kansas State University Undergraduate Research Forum. Manhattan, KS. April 2006. (Poster)

Mueting, SA; SM Wisely; RM Santymire; T Livieri; J Howard. Genetic Diversity Lost and Gained: Conservation Genetics of the Black-footed Ferret. Kansas Chapter of The Wildlife Society Meeting. Fort Hays State University, Hays, KS. February 2006. *Best Undergraduate Oral Paper*

Mueting, SA; SM Wisely; RM Santymire; T Livieri; J Howard. Genetic Diversity Lost and Gained: Conservation Genetics of the Black-footed Ferret. Central Plains Society of Mammalogists Meeting. Truman State University, Kirksville, MO. October 2005. (Poster)

HONORS and AWARDS

Outstanding Master's Research. 2009.

Terry C. Johnson Cancer Research Award. 2006. \$1000 and 2007. \$1000.

Best Undergraduate Oral Paper. The Wildlife Society Meeting. 2006. \$50.

Most Promising Biology Student. Kansas State University. 2006. \$100.

KSU Semester Academic Honors. Spring 2004 and 2006.

1st place Undergraduate Oral Presentation. KSU Graduate Research Forum. 2007. \$150.

Nominated for Division of Biology's Outstanding Senior Haymaker award. 2007.

ORGANIZATIONS and PROFESSIONAL SOCIETIES

American Fisheries Society. 2008-present.