

Susan Kay King

Curriculum Vitae

August 2020

Address

166 Dangar Street
Armidale NSW 2350

E-mail skking3@ncsu.edu
Phone 0401 619 941

GIS Skills

Modeling and analytics, web services, databases, programming

- Portfolio: www.skinggis.com

Programming

API for JavaScript, HTML, Python, SQL

Software

ArcGIS, Erdas Imagine, GRASS GIS, PostgreSQL, Program R, QGIS, SPSS, Alleles in Space, GENEPOP, SPAGeDi, STRUCTURE

Education

Professional Science Master – Geospatial Information Science and Technology *North Carolina State University* (May 2019).

- Coursework aimed at geospatial modeling and analytics, programming, database design and management, web services and applications, cartography, ethics and standards.
- Cumulative GPA 4.0/4.0.

Master of Science – Biology *University of Tulsa* (August 2014).

- Primary Researcher, Department of Biological Science (October 2012 – February 2014).
 - Capture and collect tissue samples from bullfrogs and cricket frogs, extract DNA, perform PCR assay as part of research project addressing the genetic diversity of amphibians in rural and urban wetlands.
- Cumulative GPA 3.92/4.0.

Master of Science – Biology *Eastern Kentucky University* (August 2012).

- **Thesis:** Four-toed Salamander (*Hemidactylium scutatum*) nest site characteristics in natural and constructed wetlands in eastern Kentucky
- Primary Researcher, Department of Biological Sciences (March – August 2011).
 - Completed field research of Four-toed Salamander nest site characteristics in natural and constructed wetlands gaining a greater understanding of how artificial habitats impact amphibians, supervised five undergraduate assistants.
- Cumulative GPA 4.0/4.0.

Bachelor of Science – Fisheries, Wildlife, and Conservation Biology, *Summa Cum Laude* *North Carolina State University* (August 2010).

- Learned and practiced sampling techniques for vertebrates and invertebrates, identification of flora and fauna, PIT-tagged reptiles, mist-netted and banded birds.
- Dean's list four of five semesters. Overall cumulative GPA 4.0/4.0.

Bachelor of Science – Sports Medicine, *Marietta College* (May 1989).

- Athletic trainer for football, men's basketball, track and field, softball, campus sports medicine clinic. Assess and treat athletic injuries.
- Cumulative GPA 3.29/4.0.

Grants

- University of Tulsa Student Research Grant, \$1,000 – October 2012 and 2013.
- University of Tulsa Bovaird Summer Fellowship, \$4,346 – Summer 2013 and 2014.
- Kentucky Society of Natural History Research Grant, \$650 – August 2011.
- The American Society of Ichthyologists and Herpetologists: Gaige Award, \$500 – May 2011.
- Sigma Xi, The Scientific Research Society: Grants in Aid of Research, \$400 – April 2011.

Awards

- Earned membership in *Xi Sigma Pi*, Forestry Honor Society – April 2019 and March 2009.
- Northern Kentucky Fly Fishers Red Barrington Scholarship, \$500 – May 2011.
- Study Abroad program to Namibia through NCSU, various scholarships, \$3,500 – May 2010.
- Earned membership in the *Phi Beta Kappa* Society – April 2010.
- Earned membership in the Honor Society of *Phi Kappa Phi* – March 2010.
- Fisheries and Wildlife Summer Camp Program Scholarship at NCSU, \$500 – April 2009.
- Earned membership in *Gamma Sigma Delta*, Honor Society of Agriculture – April 2009.
- Earned membership in *Beta Beta Beta*, National Biological Honor Society – April 1989.

Presentations

GIS mapping of volunteer cleanups at Jordan Lake to remove trash and tire loadings from stormwater:

- Oral presentation at the United States Coast Guard Auxiliary Meeting, Cary, NC, June 2018.
- Oral presentation at the NC Water Resources Research Institute's Annual Conference, North Carolina State University, Raleigh, NC, March 14-15, 2018.

Four-toed Salamander (*Hemidactylium scutatum*) nest site characteristics in natural and constructed wetlands:

- Oral presentation at the World Congress of Herpetology, University of British Columbia, Vancouver, Canada, August 8 – 14, 2012.
- Oral presentation at the North Carolina Herpetological Society 2012 Spring Conference and General Meeting, Hanging Rock State Park, Danbury, NC, April 28 – 29, 2012.
- Poster presentation at the Sigma Xi 2011 Annual Meeting and International Research Conference, Raleigh Convention Center, Raleigh, NC, November 11 – 12, 2011.

Publications

Reproductive ecology and nest-characteristics of Four-toed Salamanders (*Hemidactylium scutatum*) in natural and constructed upland-embedded wetlands on the Appalachian Plateau, Kentucky. In submission to the Journal of Herpetology.

Harold Heatwole, Alana Grech, John F. Monahan, Susan King and Helene Marsh. 2012. Thermal Biology of Sea Snakes and Sea Kraits. Integrative and Comparative Biology 52: 257—273.

Experience

GIS Intern – Clean Jordan Lake (May 2017 – August 2017)

- Analyze tabular data, create shapefiles from KML files, map variables related to trash removal.
- Produced map images and online maps using Arc Map and ArcGIS Online.

Research Assistant – North Carolina State University, Department of Biological Sciences (October 2015 – January 2016).

- Collate data and prepare manuscript for publication as a chapter in book on academic policies.

Teaching Assistant – University of Tulsa, Department of Biological Science (August 2012 – May 2014). Eastern Kentucky University, Department of Biological Sciences (August 2010 – May 2011 and January 2012 – May 2012). North Carolina State University, Department of Biology (August 2009 – May 2010).

- Teach Vertebrate Physiology laboratory. Lecture and lead students in laboratory experiments, grade laboratory reports, proctor exams. Fall 2012, Fall 2013.
- Assist instructor for Molecular/Cell Biology laboratory. Assist students with laboratory experiments, grade exams. Spring 2013, 2014.

- Teach Principles of Biology laboratory (Fall 2010) and Human Anatomy laboratory (Spring 2011 and Spring 2012). Lecture and lead students in laboratory experiments, create and grade exams, grade lab reports. Provide lecture support by proctoring exams.
- Teach Introductory Biology: Ecology, Evolution, and Biodiversity laboratory which included assessing aquatic ecosystems, animal diversity and performing PCR assay, creating and grading exams. Responsible for teaching and testing 24 students, grading exams, homework, and writing assignments. Keep records of grades and attendance and provide lecture support by proctoring and grading exams.

Research Aide – *Eastern Kentucky University, Department of Biological Sciences* (June – August 2011).

- Completed training for the Kentucky Wetland Rapid Assessment Method, under development at Eastern Kentucky University, performed field assessment of 12 wetlands.

Research Assistant – *North Carolina State University, Department of Fisheries and Wildlife* (November 2008 – April 2009 and November 2009 – December 2009).

- Watch video recording of birds' nests and keep records of observations of behavior.

Veterinary Technician/Assistant – *Alamance Veterinary Hospital* (September 2007 – December 2008). *Hemlock Bluffs Animal Hospital* (April 2007 – July 2007). *Triangle Veterinary Hospital* (June 2006 – March 2007). *Cole Park Veterinary Hospital* (April 2004 – February 2006). *Carrboro Plaza Veterinary Clinic* (June 1994 – May 2000).

- Surgical duties include placing IV catheters, inducing and monitoring anesthesia, performing dental prophylaxis and tooth extractions. Clean and sterilize equipment with steam autoclave or ethylene oxide gas.
- Intensive care duties include placing IV catheters, administering fluid therapy, chemotherapy or other medications. Collecting blood samples and running labwork on a specified schedule.
- Prepare appointments for doctor's care by obtaining vital statistics and laboratory samples and preparing vaccines. Run in-house fecal analysis, urinalysis, and blood work. Fill prescriptions, take and process radiographs.
- Special duties include designing and implementing a physical rehabilitation program and teaching pet exercise techniques to owners (CPVH).

Surgical Technologist – *Chapel Hill Surgical Center* (January 2002 – January 2004).

- Sterile surgical set-up and patient preparation. Assist surgeon by passing instruments, tissue exposure and manipulation, suture cutting, and performing sub-cutaneous and skin closure. Used electrocautery and microsurgical techniques. Human outpatient surgical setting.
- Responsible for biological monitoring of steam and gas sterilization, developed a process for monitoring the effectiveness of the sterilization process.
- Earned Key Operator Certificate for Anprolene Gas Sterilization.
- Cleaned and sterilized instruments, equipment, and surgical suites.

Carnivore Keeper – *Carnivore Preservation Trust* (December 1999 – October 2000).

- Responsible for diet preparation, observation of health status, feeding and medicating carnivores such as leopards, tigers, ocelots, and binturongs.
- Assisted the veterinarian with routine examinations and surgical procedures, capture and sedation, record keeping and supply ordering.
- Provide educational tours for the public. Supervise volunteers, including organizing a food donation shuttle.
- Maintenance of enclosure and grounds. Provide environmental enrichment.

Physical Therapy Assistant/Athletic Trainer – *Cary Physical Therapy* (August 1991 – May 1992). *Butler Physical Therapy* (June 1989 – June 1990).

- Serve as Athletic Trainer for Moniteau High School, assessing and treating all sports-related injuries. Submit reports on injuries, create a budget and order supplies.
- Use exercise and physical modalities to treat musculoskeletal injuries, supervise work-hardening patients in clinic setting.

Volunteering

- Chat Moderator for Pittsburgh Hays Bald Eagle cam chat room. Answer questions from online chatters and elementary and middle school classrooms about the natural history, behavior, and ecology of bald eagles, peregrine falcons, bluebirds, and other animals. Maintain adherence to the chat room policies. Find online resources for information to share with others. February 2015 – August 2015, 15 hours per week.
- Herpetology Weekend, sponsored by the Kentucky State Parks: Assisted in leading a field trip to search for four-toed salamanders. May 2012, May 2011.
- Family Nature Day, sponsored by the Division of Natural Areas at Eastern Kentucky University: Assisted in leading the Woodland Creature Hunt. October 2011.
- Guest Reader for Dr. Seuss' Birthday at the Model Lab School: Read Dr. Seuss books to 3rd and 4th graders. March 2011.
- Olds Elementary School unit on Owls: Assist the teacher with owl lecture by teaching natural history of owls to 5th grade students. February 2010.
- Carnivore Preservation Trust: Assisted veterinarian, induction and monitoring of anesthesia, laboratory procedures and record keeping. Fed fruit eaters and tigers. January 1999 – December 1999, 20 hours per week.

Affiliations

- Urban and Regional Information Systems Association: April 2017 – May 2019.
- Society for Integrative and Comparative Biology: July 2011 – December 2014.
- Sigma Xi: The Scientific Research Society, Associate Member: April 2011 – December 2014.
- The Society of Wetland Scientists: February 2011 – December 2011.
- The American Society of Ichthyologists and Herpetologists: February 2011 – December 2014.
- The Society for the Study of Amphibians and Reptiles: March 2010 – December 2014.
- The Herpetologists' League: March 2009 – December 2014.
- The Wildlife Society: January 2008 – December 2014.
- North Carolina Chapter of The Wildlife Society: January 2009 – December 2009.
- Leopold Wildlife Club, North Carolina State University Student Chapter of The Wildlife Society: Fall Semester 2008.
- The American Association of Zoo Keepers: December 1999 – August 2002.
- National Athletic Trainer's Association: May 1989 – December 1994.

Certifications

- The National Athletic Trainers' Association, Certified Athletic Trainer: June 1989 – August 1994.

Symposia

- **Advanced Education for Veterinary Technicians: Advanced Laboratory Skills.** Courses included Advanced Hematology Techniques for Veterinary Technicians and Advanced Urinalysis: Making Urine Crystal Clear. January 2006.
- **The Third International Symposium on Rehabilitation and Physical Therapy in Veterinary Medicine.** Classes concentrated on canine rehabilitation. August 2004.
- **The International Wildlife Rehabilitation Council.** Advanced Skills Seminars on wound-management and fluid-therapy. October 1999.

References

- Dr. Francis A. DiGiano; Supervisor for Internship with Clean Jordan Lake Co-Founder and Past-President, Clean Jordan Lake Professor Emeritus, Department of Environmental Science and Engineering

University of North Carolina – Chapel Hill
PO Box 1447
Pittsboro, NC 27312 USA
(919) 200-1079
frandigiano@cleanjordanlake.org

- Dr. Eric Money; MGIST Advisor
Associate Director of Professional Education, Center for Geospatial Analytics
Director of Graduate Programs
College of Natural Resources
Jordan Hall 5108, Campus Box 7106
North Carolina State University
2800 Faucette Drive
Raleigh, NC 27695 USA
(919) 513-0408
esmoney@ncsu.edu
- Dr. Stephen Richter; MS Advisor
Professor, Department of Biological Sciences
Director, Division of Natural Areas
Eastern Kentucky University
Division of Natural Areas
Science Building 3106
521 Lancaster Avenue
Richmond, KY 40475 USA
(859) 622-1476
stephen.richter@eku.edu

*Please note: due to current Covid-19 restrictions forcing limited time being spent in their offices, all of my references prefer to be contacted via email