

## CURRICULUM VITAE

### **DAVID K. SAUNDERS**

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Department of Biology  
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#### **EDUCATION:**

B.S. Oklahoma Panhandle State University, 1984 (Biology)  
M.S. Emporia State University, 1986 (Zoology)  
Ph.D. Kansas State University, 1992 (Physiology)

#### **TEACHING:**

Professor, University of Northern Iowa – 2018 - Present  
Professor and Head, University of Northern Iowa – 2008 - 2018  
Professor and Chair, Augusta State University - 2005 - 2008  
Professor – Emporia State University – 2003-2005  
Associate Professor - Emporia State University - 1999 - 2003  
Assistant Professor - Emporia State University 1992-98

#### **PROFESSIONAL SERVICE:**

Outside Program Reviewer – Univ. of Central Arkansas Dept. of Biology (Summer 2017)  
Outside Program Reviewer – Univ. of Wisconsin-La Crosse Dept. of Biology (Fall 2017)  
Outside Program Reviewer – Western Illinois Univ. Dept. of Biology (Spring 2019)

#### **RESEARCH INTERESTS AND ACTIVITIES:**

Floral Photography, Physiological Ecology, Macrophotography.

#### **HONORS:**

Helping Students Succeed Commendation, 2017 University of Northern Iowa  
Apple Polisher Award – University of Northern Iowa, 2016  
Presidential Award for Outstanding Scholarship – Emporia State Univ. 2005  
Xi Phi Outstanding Faculty Member, Emporia State Univ. 1997-1998  
College of Liberal Arts and Sciences Outstanding Teacher, Emporia State Univ. 1995-1996

**PUBLICATIONS:**

- Saunders, D.K. (1986) Bioenergetics of wintering scaled quail. M.S. Thesis, Emporia State University, Emporia, Kansas.
- Saunders, D.K. and J.W. Parrish. (1987) Assimilated energy of seeds consumed by scaled quail in Kansas. *J. Wildl. Manag.* 51(4):787-790.
- Parrish, J.W. and **D.K. Saunders**. (1989) Simplified cage modification to reduce self-induced injury in confined birds. *Wildl. Soc. Bull.* 17:80-81.
- Saunders, D.K. and M.R. Fedde. (1991) Physical conditioning: Effect on the myoglobin concentration in skeletal and cardiac muscle of bar-headed geese. *Comp. Biochem. Physiol.* 100A: 349-352.
- Saunders, D.K. (1992) Seasonal morphological and biochemical changes in the muscles of blue-winged teal. Ph.D. Dissertation, Kansas State University, Manhattan Kansas.
- Kilgore, J.L., B.F. Timson, **D.K. Saunders**, R.R. Kraemer, R.D. Klemm and C.R. Ross. (1994) Stress protein induction in skeletal muscle: comparison of laboratory models to naturally occurring hypertrophy. *J. Appl. Physiol.* 76(2): 598-601.
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- Saunders, D.K. and M.R. Fedde (1994) Exercise performance of birds. In "Comparative Vertebrate Exercise Physiology" (J. Jones ed.) *Advances in Veterinary Science and Comparative Medicine*, Vol 38B. Academic Press. Invited Book Chapter.
- Saunders, D.K. (1996) Muscle Names, *Kansas School Naturalist* Vol 42(1): 1-14, Emporia State University. Emporia, KS.
- Brown, R.E. and **D.K. Saunders** (1998) Programmed adjustments of body weight and muscle mass in birds for the earliest return to flight following molt. *Canadian Journal of Zoology* 76: 26-32.
- Saunders, D.K. and K.H. Patel. (1998) Comparison of blood viscosity in red-eared sliders (*Trachemys scripta*) adapted to cold and room temperatures. *Journal of Experimental Zoology*, 281:157-163.
- Gustafson, P.E, R. Keith, and **D.K. Saunders**. (1998) Digital image processing as a computing tool in an interdisciplinary science course. *Journal of Computing in Small Colleges*, 13(4): 312-317.
- Gustafson, P.E. and **D.K. Saunders**. (1998) A wave equation model of rattlesnake rattle motion. *Proceedings of the 14th Annual Conference on Applied Mathematics*.

- Saunders, D.K., O. Fowler, and K.N. Smalley. (2000) The effects of estradiol treatment on the blood viscosity of the bullfrog, *Rana catesbeiana*. Transactions of the Kansas Academy of Sciences, 103(1-2): 38-45.
- Saunders, D.K., A.C. Roberts, and G.R. Ultsch. (2000) Blood viscosity and hematological changes during prolonged submergence in normoxic water of northern and southern musk turtles (*Sternotherus odoratus*). Journal of Experimental Zoology, 287, 459-466.
- Aldrich, K.J. and **D.K. Saunders**, (2001) Comparison of erythrocyte osmotic fragility among ectotherms and endotherms at three temperatures. Journal of Thermal Biology, 26(3):179-182.
- Keith, R., **Saunders, D.**, and Yanik, E. (2001) *Integrative Science Studies: Mathematical and Physical Modeling of Biological Systems*, Proceedings of the 13th International Conference on Technology in Collegiate Mathematics.
- Lebelo, S.L., **D.K. Saunders**, and T.G. Crawford. (2001) Effects of stress on various blood parameters and blood viscosity in striped bass, *Morone saxatilis* (Walbaum). Transactions of the Kansas Academy of Sciences, 104(3-4): 183-194.
- Palenske, N.M. and **D.K. Saunders**. (2002) **Blood viscosity comparisons between amphibians and mammals at 3°C and 38°C**. Journal of Thermal Biology **27(6): 31-36**.
- Saunders, D.K., A.C. Roberts, K.J. Aldrich, and B. Cuthbertson. (2002) Hematological and blood viscosity changes in tail suspended rats. Aviation, Space and Environmental Medicine **73:647-653**.
- Saunders, D.K. and L.M. Sievert. (2002) Providing students the opportunity to think critically and creatively through student designed laboratory exercises. Bioscene 28(2): 9-15.
- Saunders, D.K., R.L. Keith, E. G. Yanik, and P. Gustafson. (2003) A marriage of sciences: the value of interdisciplinary research in undergraduate education. Journal of College Science Teaching, Vol XXXII, Number 6.
- Palenske, N.M. and **D.K. Saunders**. (2003) Blood viscosity and hematology American bullfrogs (*Rana catesbeiana*) at low temperature. Journal of Thermal Biology, 28(4): 271-277.
- Kilgore, J.L., C.R. Ross, and **D.K. Saunders**. (2003) Potential effects of anesthetic agents on heat shock proteins in the laboratory rat. Texas Journal of Science. 55(2):149-158.
- Keith, R.L., **D.K. Saunders**, and E.G. Yanik. (2003) Digital Imaging Investigations. The Science Teacher, 70(7): 62-66.
- Wyatt, G., **D.K. Saunders**, and D. Zelmer (2005) Academic preparation, effort and success: a

- comparison of student and faculty perceptions. *Education Research Quarterly*, 29(2): 29-36.
- Bonebrake-Barriger, L. and **D.K. Saunders**. (2006) The Case of the Disappearing Snack. *Science & Children*, 43(8): 36-39.
- Post, D.M., Snyder, M.V., Finck, E.J., and **D.K. Saunders** (2006) Caching as a strategy for surviving periods of resource scarcity; a comparative study of two species of *Neotoma*. *Functional Ecology*, 20: 717-722.
- Aldrich, K.J., **Saunders, D.K.**, Sievert, L., and Sievert, G. (2006) Comparison of erythrocyte osmotic fragility among amphibians, reptiles, birds, and mammals. *Transactions of the Kansas Academy of Science*, 109(3-4): 149-158.