

**Kristin Bishop**  
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**Department of Biology**  
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**EDUCATION:**

2006 **Ph.D., Ecology and Evolutionary Biology**, Brown University

- Advisor – Sharon Swartz
- Dissertation title: "Mechanics of Gliding and the Origin of Flight in Bats"

1994 **B.S., Zoology**, University of Washington, *magna cum laude*

**PROFESSIONAL POSITIONS:**

2017-present **Lecturer**, Department of Biology, University of Vermont

2014-2017 **Instructor**, Department of Biological Sciences, Florida International University

2010-2014 **Assistant Professor**, Department of Biological Sciences, Florida International University

2007-2009 **Postdoctoral Research Fellow**, University of California, Davis

- Advisor – Peter Wainwright
- Mechanics of suction feeding in fish

2006 **Postdoctoral Teaching Associate**, Duke University

- Co-instructor with Kathleen Smith for Comparative Vertebrate Anatomy
- Research collaboration with Daniel Schmitt
- Mechanics of compliant-limbed walking in mammals

**GRANTS AND AWARDS:**

2014 **HHMI Faculty Scholar**

2006 **NSF Postdoctoral Fellowship in Biological Informatics**

- "Performance Consequences of Diversity in Suction Feeding Fish", \$120,000

2003 **NSF Dissertation Improvement Grant**

- "Dissertation Research: Gliding Aerodynamics and the Origin of Bat Flight", \$9,894

2002 **Sigma Xi, Grant in Aid of Research**, \$815

2001 **NSF Graduate Research Fellowship**, \$81,900

**TEACHING:**

University of Vermont:

BCOR 011 – Exploring Biology

BCOR 012 – Exploring Biology II

BIOL 095 – TAP – Human Evolution – Cambrian to Present

BIOL 219 – Comparative and Functional Vertebrate Anatomy

BIOL 271 – Evolution

BIOL 295 – Vertebrate Zoology

Florida International University:

BSC 1011 – General Biology II

ZOO 3303 – Vertebrate Zoology

ZOO 3713C – Comparative Vertebrate Anatomy

PCB 4674 – Evolution

BSC 4931 – Senior Seminar

Duke University:

Comparative Vertebrate Anatomy

## **PROFESSIONAL DEVELOPMENT:**

UVM

Book Group – “Ungrading” – Spring 2021

CTL Online Teaching Bootcamp – Summer, 2020

Writing in the Disciplines – Spring Workshop, Spring 2019

FIU’s Center for the Advancement of Teaching (CAT)

1. Workshops:

Gateway Course Development Workshops, CAT

Four full-day workshops that took place in March, 2015, May 2015, and May 2016.

CAT Faculty Fellow, Summer 2015 and Spring 2016

Facilitated book groups, new TA orientations, course design institutes, syllabus clinics, hybrid course development workshop. Provided mid-semester feedback sessions to faculty.

CAT Course Design Institute

I participated in CAT’s course design institute for my Evolution class in June 2014. This four-day workshop improved my teaching by providing me a repeatable structure for ensuring alignment between my course objectives, learning activities, and assessments of student learning. I have used this framework for designing or re-designing all of my classes.

STEM Transformation Institute Workshop

Using LA’s in the classroom. Learned effective methods of preparing and interacting with learning assistants to maximize their benefit to the students.

2. CAT faculty reading groups (Groups that I facilitated indicated in bold.):

*Developing Learner-Centered Teaching*, Phyllis Blumberg and Maryellen Weimer

*Teaching First-Year College Students*, Bette LaSere Erickson and Calvin B. Peters

*Made to Stick*, Chip Heath and Dan Heath

*Drive*, Daniel Pink

***How Learning Happens***, by Susan A. Ambrose and Michael W. Bridges

*Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*, John C. Bean and Maryellen Weimer

***Creating Self-Regulated Learners***, Linda Nilson and Barry Zimmerman

*Learner-Centered Teaching*, Terry Doyle and Todd Zakrajsek

***Cheating Lessons***, James M. Lang

### 3. Conferences:

Society for Teaching and Learning in Higher Education annual meeting, Vancouver, BC, June 2015

Evolution 2015, Guarujá, *Brazil*

Attended sessions on Evolution teaching.

JNGI Gateway Course Experience Annual Meeting, Atlanta, GA April 2016

Gave a workshop entitled “Partners in Reform: Faculty and Administrator Perspective on Transforming Gateway Biology” along with colleagues Marcy Kravec, Leslie Richardson, and Sat Gavassa.

### PUBLISHED WORKS:

**Bishop**, K.L., A.K. Pai, and D. Schmitt. 2008. Whole Body Mechanics of Stealthy Walking in Cats. *PLoS ONE* 3(11): e3808. doi:10.1371/journal.pone.0003808

**Bishop**, K.L., P.C. Wainwright, and R. Holzman. 2008. Anterior to Posterior Wave of Buccal Expansion in Suction Feeding Fish is Critical for Optimizing Fluid Flow Velocity Profile. *J. Roy. Soc. Interface* 5: 1309-1316.

Holzman, R., D. Collar, S.W. Day, K.L. **Bishop**, and P.C. Wainwright. 2008. Scaling of suction-induced flows in bluegill: morphological and kinematic predictors for the ontogeny of feeding performance. *J. Exp. Biol.* 211: 2658-2668

Song, A., Tian, X., E. Israeli, R. Galvao, K. **Bishop**, S. Swartz, K. Breuer. 2008. The aeromechanics of low aspect ratio compliant membrane wings, with applications to animal flight. *AIAA Journal* 46: 2096-2196.

**Bishop**, K.L. 2008. The evolution of flight in bats: Narrowing the field of plausible hypotheses. *Quarterly Review of Biology* 83: 153-169.

**Bishop**, K.L. and W. Brim-deForest. 2008. Kinematics of turning maneuvers in the southern flying squirrel, *Glaucomys volans*. *J. Exp. Zool.* 309: 225-242.

**Bishop**, K.L. 2007. Aerodynamic force production and stability during gliding in the sugar glider, *Petaurus breviceps*. *J. Exp. Biol.* 210:2593-2606.

**Bishop**, K.L. 2006. The relationship between 3-D kinematics and gliding performance in the southern flying squirrel, *Glaucomys volans*. *J. Exp. Biol.* 209: 689-701.

Galvao, R., Israeli, E., Song, A., Tian, X., **Bishop**, K., Swartz, S. and Breuer, K.S. The aerodynamics of compliant membrane wings modeled on mammalian flight. AIAA Paper 2006-2866. San Francisco, CA. June 2006.

Swartz, S., K. **Bishop**, and M.-F. I. Aguirre. 2006. Dynamic complexity of wing form in bats: implications for flight performance. Pp. 110-130. In: *Functional and Evolutionary Ecology of Bats* (A. Zubaid, G.F. McCracken, and T.H. Kunz, eds.). Oxford University Press, New York.

### PUBLISHED ABSTRACTS:

- Bishop**, K.L., P.C. Wainwright, and R. Holzman. Anterior to Posterior Wave of Buccal Expansion in Suction Feeding Fish is Critical for Optimizing Fluid Flow Velocity Profile. *Int. and Comp. Biol.* **49**: E16
- Bishop**, K.L., A.K. Pai, and D. Schmitt. Do Walking Mechanics in Cats Favor Stealth Over Economy? *Int. and Comp. Biol.* **47**: e9.
- Schmitt, D. A.K. Pai, M. O'Neill, and K.L. **Bishop**. Center of mass movements in arboreal and terrestrial prosimians. *Am. J. Phys. Anthropol.* **46**: 187.
- Mitchell, T.R.T. and K.L. **Bishop**. 2008. The use of binocular cues in feline locomotion - consequences for primate evolution. *Am. J. Phys. Anthropol.* **Suppl. 46**: 156-157.
- Bishop**, K.L., A.K. Pai, and D. Schmitt. 2007. Pendular walking mechanics in domestic cats. *J. Morph.* **268**:1050.
- Schmitt, D., A.K. Pai, M. O'Neill, and K.L. **Bishop**. 2007. Center of mass movements during walking in a prosimian primate. *J. Morph.* **268**:1131-1132.
- Bishop**, K.L., S.M. Swartz, K. Breuer, and X. Tian. 2007. Compliant wings and the evolution of gliding in vertebrates. *Int. and Comp. Biol.* **46**: e12
- Schmitt, D., A.K. Pai, K.L. **Bishop**. 2007. Center of mass movements in primates. *Am. J. Phys. Anthropol.* **Suppl. 44**: 209.
- Bishop**, K.L. 2006. Kinematics and performance in two species of mammalian gliders, *Glaucomys volans* and *Petaurus breviceps*. *Int. and Comp. Biol.* **45**: 43.4A.
- Bishop**, K.L. 2005. Kinematics of short glides in the southern flying squirrel, *Glaucomys volans*. *Int. and Comp. Biol.* **44**: 525A.
- Bishop**, K.L. and Breuer, K. 2004. Effect of shape on the aerodynamic forces generated by flexible wings. *J. Morph.* **260**: 278.
- Bishop**, K.L. 2002. A physical modeling approach for determining the effect of shape on the aerodynamic forces generated by a flexible wing. *Int. and Comp. Biol.* **42**: 118A.
- Bishop**, K.L., Swartz, S.M., Stockwell, E.F., Skene, J.A., and Ismael-Aguirre, M.F. 2001. Three-dimensional complexity in bat wing movements. *Am. Zool.* **41**: 1393A
- Swartz, S.M., K.L. **Bishop**, M.-F.I. Aguirre, E.S. Stockwell, J.A. Skene. 2001. Large-scale deformations in the wing bones of flying bats. *Am. Zool.* **41**: 1601A.
- Bishop**, K. 2000. Evolutionary patterns in bat wing shape. *Am. Zool.* **40**: 945A.
- Bishop**, K. 1999. Comparison of aerodynamics of gliding frogs vs. non-gliding frogs using flow visualization. *Am. Zool.* **39**: 501A