#### **CURRICULUM VITAE**

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## Professor and Head, Department of Biological Sciences Edward G. Schlieder Professor in Environmental Studies and Sustainability

#### Education

- Ph.D. Environmental and Evolutionary Biology, December 1992 -- The University of Louisiana at Lafayette, Dissertation: Community Ecology of Larval Plethodontid Salamanders: The Effect of Predation on Age and Size at Metamorphosis
- M.S. Biology, August 1988 -- Western Carolina University, Cullowhee, North Carolina, Thesis: The Correlation between Egg Size Variation and Habitat Variability in Several Species of Salamanders: A Test of the Adaptive "Coin flipping" Hypothesis
- B.A. Biology, May 1986 -- The College of Wooster, Wooster, Ohio, Independent Study Thesis: Territorial Behavior in the Red-backed Salamander: Effect of a Variable Food Source

#### **Experience**

- Fall 2013 -- current: Professor and Head, Department of Biological Sciences, Southeastern Louisiana University
- Fall 2005 -- Summer 2013: Professor, Department of Biology, Minot State University
- Spring 2008 Spring 2014: Adjunct Graduate Faculty, Graduate School, University of North Dakota
- Spring 2004 -- Spring 2007: Chair, Department of Biology, Minot State University
- Fall 2004 Summer 2013: North Dakota INBRE Investigator, University of North Dakota School of Medicine and Health Sciences, Minot State Principal Investigator
- Fall 2004 Spring 2014: Adjunct Graduate Faculty, University of North Dakota School of Medicine and Health Sciences
- Fall 2001 Spring 2004: Associate Professor, Department of Biology, Minot State University
- Fall 1998 -- Spring 2001: Assistant Professor, Department of Biology, Minot State University
- Fall 1994 -- Spring 1998: Assistant Professor, Department of Biology, Clarke College Fall 1993-Spring 1994: Assistant Professor, Department of Biology, Jamestown College (Sabbatical replacement)
- Spring 1993-Spring 1994: Adjunct Graduate Faculty, Western Carolina University Spring 1993: Visiting Instructor, Western Carolina University
- Summer 1993: Postdoctoral researcher, Great Smoky Mountains Conservation Association

Fall 1992: Postdoctoral researcher, Highlands Biological Station

Summer 1991: Invited lecturer, Highlands Biological Station

Fall 1988-Summer 1992: Doctoral Fellow, The University of Louisiana at Lafayette

Summer 1987-Spring 1988: Teaching assistant, Western Carolina University

Fall 1986-Spring 1987: Research assistant, Western Carolina University

Summer 1985: Field research assistant, Bureau of Land Management, Elko, Nevada

#### **Honors and Positions**

- 2015-2018 -- Edward G. Schlieder Professor in Environmental Studies and Sustainability, Southeastern Louisiana University
- 2015 -- named as Distinguished Member to National Society of Collegiate Scholars
- 2011-- 2017 -- Editor, *Copeia*, the journal of the American Society of Ichthyologists and Herpetologists
- 2011 -- 2017 -- Executive Committee, American Society of Ichthyologists and Herpetologists
- 2011 -- 2017 -- Chair, Publications Policy Committee, American Society of Ichthyologists and Herpetologists
- 2010-2013 -- Elected as Councilor and member of Executive Board, North Dakota Academy of Science
- 2008-2013 -- Elected to Board of Governors, American Society of Ichthyologists and Herpetologists
- 2007-2009 -- Elected to Nominating Committee, American Society of Ichthyologists and Herpetologists
- 2006 -- Named Faculty of Semester, College of Arts and Sciences, Minot State University
- 2005 -- current -- Contributing Scientist, Global Amphibian Assessment
- 2005 -- current -- Core participant, *Ambystoma* Research Coordination Network
- 2004 -- Presented with "Essence of Excellence" award, MSU Student Ambassadors
- 2004-05 -- Executive Director of North Dakota State Science and Engineering Fair
- 2002 -- Named Professor of the Year at Minot State University
- 2002 -- 2005 Editor of *Communications*, the newsletter of the Herpetologists' League
- 2001-02 -- Executive Director of North Dakota State Science and Engineering Fair
- 2000-02 -- Secretary of Minot Chapter of Sigma Xi
- 1998-99 -- Recipient of KXMC "Golden Apple" Teacher program
- 1998 -- Nominated for Meneeve Dunham Teacher of the Year, Clarke College
- 1998 -- Elected President of Dubuque Chapter of Sigma Xi
- 1997-98 -- Elected Vice-Chair of the Division of Zoology, Iowa Academy of Science
- 1997-98 -- Elected Vice-President of Dubuque Chapter of Sigma Xi
- 1996 -- Named to Who's Who among America's Teachers
- 1995-96 -- Elected President of Dubuque Chapter of Sigma Xi
- 1994-95 -- Elected Vice-President of Dubuque Chapter of Sigma Xi
- 1993-94 -- Named Professor of the Year at Jamestown College
- 1993-95 -- Recognized by American Men and Women of Science
- 1992 -- Awarded Highlands Biological Station Postdoctoral Grant-in-aid
- 1991-1993 -- Appointed as member of the Graduate Student/Postdoctoral Affairs Committee of the American Society of Zoologists
- 1991-1993 -- Appointed as graduate student representative of the Division of History and Philosophy of Biology, American Society of Zoologists

1988-1992 -- Awarded Louisiana Board of Regents Doctoral Fellowship

1988 -- Elected to Phi Kappa Phi

1987 -- Elected to Sigma Xi

## **Grant History**

- 2018: \$2,000 "Larval life history biology of the Southern Two-lined Salamander, Eurycea cirrigera", Real World Ready Faculty Grants, Southeastern Louisiana University
- 2009-2013: \$669,648 "Functional genomics of populations: relating gene expression to cadmium risk", National Institutes of Health, North Dakota INBRE
- 2008-2010: \$65,400 "Establishing Amphibian Population Levels in northwest North Dakota", North Dakota Game and Fish Department
- 2007: \$500 "Wolford School OWLS site enhancement project", North Dakota Game and Fish Department
- 2004: \$1783 -- "Dead and dying frogs: what does it mean?", Intellectual Climate Committee, Minot State University
- 2004-2009: \$728,394 -- "Functional genomics of endocrine disruption: relating gene expression to morphological variability", National Institutes of Health, North Dakota INBRE
- 2004: \$6253 "Amphibian malformations at the Upper Souris National Wildlife Refuge", Challenge Cost Share Proposal, U. S. Fish and Wildlife Service, coauthored with Cory Rubin
- 2003: \$6000 -- "Rare plant survey: Smooth Goosefoot (*Chenopodium subglabrum*)", U.S. Forest Service, coauthored with Richard Barkosky.
- 2002: \$7000 -- "Flying dinosaurs around us: Birding, ornithology and ecotourism in northwestern North Dakota, Intellectual Climate Committee, Minot State University (with four authors)
- 1997: \$3500 -- "Developmental plasticity in two anurans", Summer Internship Program in the Sciences, Clarke College
- 1997: \$870 -- "Life history of miniaturized *Desmognathus quadramaculatus*", Faculty Development Grant, Clarke College
- 1995: \$2710 -- "Computer simulations in Evolution and Ecology", Title III Faculty Project Award, Clarke College
- 1993: \$3500 -- "Zippin removals and population estimates for the unique red cheeked salamander, *Plethodon jordani*", Carlos C. Campbell Memorial Research Fellowship, Great Smoky Mountains Conservation Association
- 1992: \$3600 -- "Ethological isolation betweeen parapatric populations of the salamander *Gyrinophilus porphyriticus*", Highlands Biological Station grant-in-aid
- 1991: \$1800, \$600, and \$335 -- "Predation, growth history and metamorphosis in larval plethodontid salamanders", Highlands Biological Station grant-in-aid and Ralph Sargent Memorial Scholarship, and American Society of Zoologists travel award
- 1990: \$1600, \$600, and \$300 -- "Regulation of guild structure in stream salamander communities", Highlands Biological Station grant-in-aid, Ralph Sargent Memorial Scholarship, American Society of Zoologists travel award
- 1988-92: \$62,000 -- "Community Ecology of Larval Plethodontid Salamanders: The Effect of Predation on Age and Size at Metamorphosis", Louisiana Board of Regents Doctoral Fellowship (with R.G. Jaeger, University of Southwestern

Louisiana)

1987: \$450 -- "Small mammal communities in the Primeval Forest, Macon County, North Carolina", North Carolina Nature Conservancy small grant, coauthored with S. Randal Voss

#### **Publications**

- Beachy, C.K. 2018. Effects of growth rate and temperature on metamorphosis in the Blue Ridge Two-lined Salamander, *Eurycea wilderae* (Caudata, Plethodontidae, Hemidactyliinae, Spelerpini). Southeastern Naturalist, 17:423-432.
- Erdmann, J.A., C.D. Godwin, M.R. Villalba-Guerra, D.C. Campbell, J. Donini, C.E. Parker, A.E.E. Rupp, C.A. Weyand, M.A.J. Partin, T. Borgardt, and C.K. Beachy. 2018. Larval life history of *Lithobates sphenocephalus* (Southern Leopard Frog) in Southeast Louisiana. Southeastern Naturalist 17:221-229.
- Beachy, C.K., T.J. Ryan, and R.M. Bonett. 2017. How metamorphosis is different in plethodontids: larval life history perspectives on life cycle evolution. Herpetologica 73:252-258.
- Ihli, L.S., and C.K. Beachy. 2016. Experimental analysis of allocation during larval development in ambystomatid salamanders. Herpetologica 72:1-5.
- Sever, D.M., D. Seigel, M.S. Taylor, and C.K. Beachy. 2016. Phylogeny of mental glands, revisited. Copeia 104:83-93.
- Clarkson, P., and C.K. Beachy. 2015. Induction of metamorphosis causes differences in sex-specific allocation patterns in axolotls (*Ambystoma mexicanum*) that have different growth histories. Journal of Herpetology 49:629-626.
- Rabe, A., M. Lannoo, C.K. Beachy. 2013. *Lithobates pipiens*. Malformation. Herpetological Review 44:292.
- Radi, A., and C.K. Beachy. 2013. *Ambystoma mavortium*. Life history and behavior under the ice. Herpetological Review 44:291-292
- Richter, J., L. Martin, and C.K. Beachy. 2009. Increased larval density induces accelerated metamorphosis independently of growth rate in the frog *Rana sphenocephala*. Journal of Herpetology 43:551-554.
- Monaghan, J.R., L.G. Epp, S. Putta, R.B. Page, J.A. Walker, C.K. Beachy, W. Zhu, G.M. Pao, I.M. Verma, T. Hunter, S.V. Bryant, D.M. Gardiner, T.T. Harkins, and S.R. Voss. 2009. Microarray and cDNA sequence analysis of transcription during nerve-dependent limb regeneration. BMC Biology 7:1.
- Cotter, J.D., A. Storfer, R.B. Page, C.K. Beachy, and S.R. Voss. 2008. Transcriptional response of Mexican axolotls to *Ambystoma tigrinum* virus (ATV) infection. BMC Genomics 9:493.
- Page R.B., S.R.Voss, A.K. Samuels, J.J. Smith, S. Putta and C.K. Beachy. 2008. Effect of thyroid hormone concentration on the transcriptional response underlying induced metamorphosis in the Mexican axolotl (*Ambystoma*). BMC Genomics 9:78.
- Monaghan, J., J. Walker, R. Page, S. Putta, C. Beachy, and S. Voss. 2007. Early gene expression during natural spinal cord regeneration in the salamander *Ambystoma mexicanum*. Journal of Neurochemistry 101:27-40.
- Page, R.B, Monaghan, J.R., Samuels, A.K., Smith, J.J., Beachy, C.K., and Voss, S.R. 2007. Microarray analysis identifies keratin loci as sensitive biomarkers for thyroid hormone disruption in salamanders (*Ambystoma*). Comparative Biochemistry and Physiology Part C: Toxicology and Pharmacology 145:15-27.

- Hickerson, C. M., E. L. Barker, and C. K. Beachy. 2005. Determinants of metamorphic timing in the Black-bellied salamander, *Desmognathus quadramaculatus*. Southeastern Naturalist 4:33-50.
- Beachy, C. K. *Gyrinophilus gulolineatus*. 2005. Pp. 1941-1944. In Lannoo, M. J. (Ed.). Status and Conservation of U.S. Amphibians. Volume 2: Species Accounts. University of California Press, Berkeley, California.
- Beachy, C. K. *Gyrinophilus palleucus*. 2005. Pp. 1944-1948. In Lannoo, M. J. (Ed.). Status and Conservation of U.S. Amphibians. Volume 2: Species Accounts. University of California Press, Berkeley, California.
- Beachy, C. K. *Gyrinophilus porphyriticus*. 2005. Pp. 1948-1954. In Lannoo, M. J. (Ed.). Status and Conservation of U.S. Amphibians. Volume 2: Species Accounts. University of California Press, Berkeley, California.
- Beachy, C. K. *Gyrinophilus subterraneus*. 2005. Pp. 1954-1957. In Lannoo, M. J. (Ed.). Status and Conservation of U.S. Amphibians. Volume 2: Species Accounts. University of California Press, Berkeley, California.
- Beachy, C. K., and R. C. Bruce. 2003. Life history of a small form of the plethodontid salamander *Desmognathus quadramaculatus*. Amphibia-Reptilia 24:13-26.
- Adams, D. C., and C. K. Beachy. 2001. Morphometric variation in southern Appalachian populations of the plethodontid salamander, *Gyrinophilus porphyriticus*. Herpetologica 57:353-364.
- Beachy, C. K. 2001. Effects of growth history and thyroxine-induced acceleration on metamorphic timing in the toad *Bufo americanus* (Amphibia, Anura). Copeia 2001:829-834.
- Beachy, C. K., T. H. Surges, and M. Reyes. 1999. Effects of developmental and growth history on metamorphosis in the gray treefrog, *Hyla versicolor* (Amphibia, Anura). Journal of Experimental Zoology 283:522-530.
- Beachy, C. K. 1997. Courtship behavior in the plethodontid salamander *Gyrinophilus porphyriticus*. Herpetologica 54:289-296.
- Beachy, C. K. 1997. Effects of predatory larval *Desmognathus quadramaculatus* on growth, survival, and metamorphosis of larval *Eurycea wilderae*. Copeia 1997:131-137.
- Beachy, C. K. 1996. Reduced courtship success between parapatric populations of the plethodontid salamander *Gyrinophilus porphyriticus*. Copeia 1996:199-203.
- Beachy, C. K. 1995. Age at maturation, body size, and life-history evolution in the salamander family Plethodontidae. Herpetological Review 26:179-181.
- Voss, S. R., D. G. Smith, C. K. Beachy, and D. G. Heckel. 1995. Allozyme variation in neighboring isolated populations of the plethodontid salamander *Leurognathus marmoratus*. Journal of Herpetology 29:493-497.
- Beachy, C. K. 1995. Effects of larval growth history on metamorphosis in a stream dwelling salamander (*Desmognathus ochrophaeus*). Journal of Herpetology 29:375 382.
- Beachy, C. K. 1994. Community ecology in streams: Effects of two species of predatory salamanders on a prey species of salamander. Herpetologica 50:129-136.
- Bruce, R. C., C. K. Beachy, P. G. Lenzo, S. P. Pronych, and R. J. Wassersug. 1994. Effects of lung reduction on rheotactic performance in amphibian larvae. Journal of Experimental Zoology 268:377-380.
- Beachy, C. K. 1993. Guild structure in streamside salamander communities: a test for interactions among larval plethodontid salamanders. Journal of Herpetology 27:465-468.

- Beachy, C. K. 1993. Differences in variation in egg size for several species of salamanders that use different larval habitats. Brimleyana 18:1-12
- Beachy, C. K., and R. C. Bruce. 1992. Lunglessness in plethodontid salamanders is consistent with the hypothesis of a mountain stream origin: a response to Ruben and Boucot. American Naturalist 139:839-847.
- Beachy, C. K. 1991. *Ambystoma maculatum* (Spotted Salamander). Predation. Herpetological Review 22:128.

## Other reports

- Cabarle, K.C., and C.K. Beachy. 2008, 2009, and 2010. Reports to North Dakota Department of Game and Fish. Establishing amphibian population levels in northwestern North Dakota. NDGF project # MI50010225.
- Junglas, K., C. Rubin, and C.K. Beachy. 2005. Final Report to the U.S. Fish and Wildlife Service on Survey of Amphibian Malformations at Upper Souris National Wildlife Refuge. USDI Grant# 62680-4-J001.
- Barkosky, R.R. and C.K. Beachy. 2003. Rare Plant Survey: Smooth Goosefoot (*Chenopodium sublglabrum*): Conducted within the Riparian Habitat Adjacent to the Little Missouri River, Little Missouri National Grasslands, North Dakota. USFS Grant# R1-08-03-41.

## **Courses taught**

Environmental Biology\*\*
Systematic Zoology
Vertebrate Structure & Function
Amphibian Larval Biology\*
Botany
Concepts of Biology\*\*
Principles of Biology II\*\*
\*--graduate level course
\*\*--non-majors course

Population Genetics\*
Evolution
General Ecology
Biostatistics
Introductory Zoology
Environmental Science\*\*
General Biology II

Evolutionary Processes\* Herpetology\* Marine Biology Subtropical Ecology General Biology I and II Human Biology\*\*

## Memberships

American Society of Ichthyologists and Herpetologists Herpetologists' League Society for the Study of Amphibians and Reptiles North Dakota Academy of Science Louisiana Academy of Science

#### **Peer Reviewing**

Copeia
Journal of Herpetology
American Midland Naturalist
Conservation Biology
Prairie Naturalist
Northeastern Naturalist
EvoDevo

Herpetologica
Herpetological Review
Herpetological Biology and Conservation
Applied Herpetology
Freshwater Biology
Southeastern Naturalist
Canadian Journal of Fisheries and Aquatic Sciences

Proposals to the National Institutes of Health, National Science Foundation, National Geographic Society, American Philosophical Society, Society for the Study of Amphibians and Reptiles

Judge, Graduate Student Award Competition (Herpetologists' League), Stoye and Storer Awards (American Society of Ichthyologists and Herpetologists), Graduate Student Competition (North Dakota Academy of Science, Louisiana Academy of Science), Undergraduate Student Competition (North Dakota Academy of Science, Louisiana Academy of Science)

Special Editor: Southeastern Naturalist, Northeastern Naturalist

Special Reviewer for chapters in *The biology of plethodontid salamanders* (2000, eds. Bruce, Houck and Jaeger) and *Reproductive biology and phylogeny of Urodela (Amphibia)* (2003, ed. D. Sever).

## Invited seminars and keynote addresses

March 2016: Southeastern Louisiana University, Hammond

February 2016: University of South Carolina, Beaufort

October 2015: University of Southern Mississippi, Hattiesburg

April 2014: Sam Houston State University, Huntsville, Texas

January 2014: Louisiana State University Museum of Natural History, Baton Rouge

November 2013: Ernest Liner (Louisiana Herpetology Group) Biennial Meeting, LUMCON, Chauvin, Louisiana

October 2013: Southeastern Louisiana University, College of Science and Technology lecture series, Hammond, Louisiana

October 2013: Ohio University – John Carroll University Herpetological Research Group Annual Meeting, Athens, Ohio

February 2013: Southeastern Louisiana University, Hammond, Louisiana

May 2012: UND Medical School, Grand Forks

March 2011: North Dakota State University, Fargo

February 2008: Southeastern Louisiana University, Hammond, Louisiana

January 2008: Department of Biology, University of North Dakota, Grand Forks

July 2007: Black Hills State University, Spearfish, South Dakota

September 2006: UND Medical School, Grand Forks

September 2003: North Dakota State University, Fargo

December 2000: University of North Dakota, Grand Forks, North Dakota

February 2000: Sigma Xi (Minot Chapter), Minot, North Dakota

October 1998: Sigma Xi (Minot Chapter), Minot, North Dakota

January 1998: University of Dubuque, Iowa

November 1997: Sigma Xi (Dubuque Chapter), Dubuque, Iowa

September 1997: Loras College, Dubuque

May 1997: Black Hills State University, Spearfish, South Dakota

April 1997: Clarke College, Dubuque, Iowa February 1997: Loras College, Dubuque, Iowa

February 1996: University of Kansas, Lawrence, Kansas

February 1996: University of Missouri, Columbia, Missouri

January 1996: Loras College, Dubuque, Iowa

February 1995: Loras College, Dubuque, Iowa November 1994: Sigma Xi (Dubuque Chapter), Dubuque, Iowa

May 1994: Mars Hill College, Mars Hill, North Carolina

March 1994: Northern Prairie Wildlife Research Center, Jamestown, North Dakota

October 1993: Jamestown College, Jamestown, North Dakota

November 1992: Western Carolina University, Cullowhee, North Carolina

October 1992: University of Louisiana, Lafayette

March 1992: Clemson University, Clemson, South Carolina

September 1991: Western Carolina University, Cullowhee, North Carolina

January 1991: Trent University, Peterborough, Ontario

November 1990: University of Louisiana, Lafayette

March 1990: University of Louisiana, Lafayette

## Symposia organized

Beachy, C. K, and T. J. Ryan. 2003. The Wilbur and Collins Model of Amphibian Metamorphosis: 30 Years of Progress. Annual joint meeting of Ichthylogists and Herpetologists, Manaus, Brazil.

Beachy, C., R. Barkosky, C. Keller, H. Super, and D. Warrick. 2002. The Flying Dinosaurs around Us: the Legacy and Future of Ecotourism in North Dakota. Northwest North Dakota Ornithological Symposium. Intellectual Climate Committee, Minot State University.

## Symposium presentations

- Beachy, C.K., and T.J. Ryan. 2016. How metamorphosis is different in plethodontids. Highlands Conference on Plethodontid Salamander Biology, Highlands Biological Station, North Carolina.
- Beachy, C.K. 2011. Heavy metals in North Dakota wetlands and transcriptional response by a top predator. 2011 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Beachy, C.K., M. Poitra, D.K. Blackhawk, and K.C. Cabarle. 2010. Paedomorphosis in the salamander (*Ambystoma mavortium*) in northwest North Dakota. Turtle Mountain Research Conference, Turtle Mountain Community College, Belcourt, North Dakota.
- Beachy, C.K., K.C. Cabarle, R.Winburn, W. Langer, R.B. Page, and S.R. Voss. 2009. Cadmium risk and gene expression: development of salamander as an environmental biomonitoring system. 2009 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Voss, S.R., J. Monaghan, J. Smith, R. Page, and C. Beachy. 2005. Enabling biomedical research in Ambystomatid salamanders including regeneration and environmental health assessment. "Aquatic Models of Human Disease." Athens GA.
- Voss, S.R., A. Samuels, J. Monaghan, J. Smith, and C. Beachy. 2005. *Ambystoma:* A new aquatic model for gene expression analysis of environmental factors. Oak Ridge Center for Advanced Studies Workshop: "Assessing Environmental Health and Ecosystem Function Using Molecular Tools." Oak Ridge National Laboratory, Tennessee.
- Beachy, C. K. 2003. Morphometric variation and sexual isolation in *Gyrinophilus porphyriticus*: a case study in plethodontid diversification. Joint annual meeting of Ichthyologists and Herpetologists. Instituto Nacional de Pesquisas da Amazonia and Universidade Federal do Amazonas, Manaus, Brazil.

- Ryan, T. J., and C. K. Beachy, 2003. To hell with metamorphosis: on the ecology and evolution of simple life cycles in the Amphibia. Joint annual meeting of Ichthyologists and Herpetologists. Instituto Nacional de Pesquisas da Amazonia and Universidade Federal do Amazonas, Manaus, Brazil.
- Beachy, C. K. 2002. Indirect effects in bird ecology and biotourism. Northwest North Dakota Ornithological Symposium, Minot State University, North Dakota.

## Presentations at meetings

- Pacheco, J., and C.K. Beachy. 2018. Effects of differential probiotic administration on response of *Ambystoma mexicanum* to a skin incision before and after metamorphosis. Joint annual meeting of Ichthyologists and Herpetologists. Rochester, New York.
- Bierbaum, E., R. Diaz, and C.K. Beachy. 2018. Comparative morphology of hand and foot skeletal elements in *Amphiuma* salamanders. Joint annual meeting of Ichthyologists and Herpetologists. Rochester, New York.
- Bynum, Jonathan, Stuart Wells, Joseph Incandela, and Christopher K. Beachy. 2018. The larval life history of the Southern Two-lined Salamander, *Eurycea cirrigera* (Caudata, Plethodontidae) in southern Louisiana. Joint annual meeting of Ichthyologists and Herpetologists. Rochester, New York.
- Bynum, Jonathan, Stuart Wells, Joseph Incandela, and Christopher K. Beachy. 2018. The larval life history of the Southern Two-lined Salamander, *Eurycea cirrigera* (Caudata, Plethodontidae) in southern Louisiana. Louisiana Academy of Sciences. Louisiana State University, Alexandria.
- Beachy, C.K. 2017. How plethodontid lunglessness informs a perspective on ancestral state reconstruction for life cycle evolution. Joint annual meeting of Ichthyologists and Herpetologists. Austin, Texas.
- Beachy, C.K., H.O. Beachy, and W.C. Beachy. 2017. The effect of temperature, sex and maturation status on metamorphosisis in the Western Tiger Salamander, *Ambystoma mavortium*. Louisiana Academy of Sciences. Louisiana Tech University, Ruston.
- Erdmann, J.A, C.K. Beachy, and nine others. 2017. Larval life history of the Southern Leopard Frog (*Lithobates sphenocephalus*) in southeastern Louisiana. SEPARC Annual meeting, Little Rock, Arkansas.
- Radi, A., and C.K. Beachy. 2016. The tiger in winter. Joint annual meeting of Ichthyologists and Herpetologists. New Orleans, Louisiana.
- Price, T.C., and C.K. Beachy. 2016. Drying and high growth accelerate metamorphosis in the ambystomatid salamander, *Ambystoma maculatum*. Louisiana Academy of Sciences. Louisiana State University, Alexandria.
- Clarkson, P. and C.K. Beachy. 2015. Induction of metamorphosis causes differences in sex-specific allocation patterns in axolotls (*Ambystoma mexicanum*) that have different growth histories. Joint annual meeting of Ichthyologists and Herpetologists. University of Nevado, Reno.
- Clarkson, P. and C.K. Beachy. 2015. Induction of metamorphosis causes differences in sex-specific allocation patterns in axolotls (*Ambystoma mexicanum*) that have different growth histories. Louisiana Academy of Sciences. Nichols State University.
- Lee, A., and C.K. Beachy. 2015. A comparison between the direct developing *Plethodon neomexicanus* and the paedomorphic *Ambystoma mavortium*. Louisiana Academy of Sciences. Nichols State University.

- Sever, D., and C.K. Beachy. 2014. Phylogeny of mental glands, revisited. Joint annual meeting of Ichthyologists and Herpetologists. Tennessee Aquarium, Chattanooga.
- Beachy, C.K. 2014. The effect of temperature and growth rate on metamorphosis in the plethodontid salamander, *Eurycea wilderae*. Plethodontids 2014, the Sixth Conference on the Biology of Plethodontid Salamanders. University of Tulsa.
- Sever, D., and C.K. Beachy. 2014. Phylogeny of mental glands, revisited. Joint annual meeting of Ichthyologists and Herpetologists. Plethodontids 2014, the Sixth Conference on the Biology of Plethodontid Salamanders. University of Tulsa.
- Beachy, C.K. 2014. The effect of temperature and growth rate on metamorphosis in the plethodontid salamander, *Eurycea wilderae*. Louisiana Academy of Science, LSU, Alexandria
- Beachy, C.K. 2013. The effect of temperature and growth rate on metamorphosis in the plethodontid salamander, *Eurycea wilderae*. Joint annual meeting of Ichthyologists and Herpetologists. University of New Mexico, Albuquerque.
- Beachy, C.K., H.O. Beachy, and W.C. Beachy. 2013. Effect of temperature, sex, and maturation status on metamorphosis in the Western Tiger Salamander, *Ambystoma mavortiuim*. Joint annual meeting of Ichthyologists and Herpetologists. University of New Mexico, Albuquerque.
- Wilson, M., A. Kraft, N.R. Winburn, R. Winburn, and C.K.Beachy. 2013. Differential cadmium integration in several organs during sublethal exposure in the Axolotl, *Ambystoma mexicanum*. Annual meeting of the North Dakota Academy of Science, University of North Dakota, Grand Forks.
- Beachy, C.K., H.O. Beachy, and W.C. Beachy. 2013. Effect of temperature, sex, and maturation status on metamorphosis in the Western Tiger Salamander, *Ambystoma mavortiuim*. Annual meeting of the North Dakota Academy of Science, University of North Dakota, Grand Forks.
- Beachy, C.K. 2012. Variation in sex ratio in the western tiger salamander, *Ambystoma mavortium*, is correlated with geographic variation in cadmium risk. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Langer, W., D. Wendlund, and C.K. Beachy. 2012. Big Year(s): Continuing research in amphibian life history biology in North Dakota's smallest school district (Wolford Pond, 2011 and 2012). 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Wilson, M., A. Kraft, R. Winburn, and C.K. Beachy. 2012. Differential cadmium integration in several organs during sublethal exposure in the Axolotl, *Ambystoma mexicanum*. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Winburn, N., A. Kraft, M. Wilson, C.K. Beachy, and R. Winburn. 2012. Determination of a cadmium concentration ratio for tail and liver samples of *Ambystoma mexicanum*. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Wilson, M., A. Kraft, D. Deide, R. Winburn, and C.K. Beachy. 2012. Cadmium levels in amphibians and in North Dakota wetlands. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Beachy, C.K., and H.O. Beachy. 2012. Effect of temperature on postmaturation metamorphosis in the western tiger salamander, *Ambystoma*

- *mavortium*. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Radi, A., and C.K. Beachy 2012. Under-ice activity patterns in western tiger salamanders, *Ambystoma mavortium*. 2012 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Beachy, C.K., and H.O. Beachy. 2012. Effect of temperature on postmaturation metamorphosis in the western tiger salamander, *Ambystoma mavortium*. World Congress of Herpetology and Joint Annual meeting of Ichthyologists and Herpetologists. University of British Columbia, Vancouver.
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- the North Dakota Academy of Science, University of North Dakota, Grand Forks.
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- Clarkson, P.\*, and C.K. Beachy. 2008. The influence of larval growth history and exogenous thyroid hormone on life history allocation patterns in the axololt (*Ambystoma mexicanum*). Annual meeting of the North Dakota Academy of Science, University of North Dakota, Grand Forks.
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- Symposium on Biomedical Research Excellence. NIH, Washington, D.C.
- Page, R.B., J.R. Monaghan, A.K. Samuels, J.J. Smith, C.K. Beachy, and S.R. Voss. 2006. Microarray analysis identifies keratin loci as sensitive biomarkers for thyroid hormone disruption in salamanders (*Ambystoma*). Joint annual meeting of Ichthyologists and Herpetologists. University of New Orleans, Louisiana.
- Cabarle, K.C., and C.K. Beachy. 2006. Description and development of two amphibian drift fence sites and a long term quantitative amphibian study in McLean and Ward County North Dakota. Joint annual meeting of Ichthyologists and Herpetologists. University of New Orleans, Louisiana.
- Henry, F.D.\*, and Christopher Beachy. 2006. Does size really matter? The effects of atrazine and competition on growth in the salamander (the axolotl, *Ambystoma mexicanum*). Joint annual meeting of Ichthyologists and Herpetologists. University of New Orleans, Louisiana.
- K.C. Ouedraogo\*, and C.K. Beachy. 2006. Cranial development in a miniaturized form of the salamander *Desmognathus quadramaculatus*: role of temperature and thyroid hormone. Joint annual meeting of Ichthyologists and Herpetologists. University of New Orleans, Louisiana.
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- timing in ambystomatid salamanders. Annual meeting of the North Dakota Academy of Science, University of North Dakota, Grand Forks.
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- Beachy, C. K., and T. J. Ryan. 2003. To hell with metamorphosis: on the ecology and evolution of simple life cycles in the Amphibia. Annual meeting of the North Dakota Academy of Science, Minot State University, North Dakota.
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- Ihli, L. S. and C. K. Beachy. 2002. Effects of light, growth history and temperature on larval life history parameters in ambystomatid salamanders. Annual meeting of the North Dakota Academy of Science, University of North Dakota, Grand Forks, North Dakota.
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- Ambystoma talpoideum. Annual meeting of the North Dakota Academy of Science, Bismarck State College, North Dakota.
- Beachy, C.K., and C. Hein. 2000. Larval life history of the black-bellied salamander, Desmognathus quadramaculatus: effects of temperature and thyroid hormone on metamorphic timing. Joint annual of meeting of the North Dakota Academy of Science, South Dakota Academy of Science, and Minnesota Academy of Science. Moorhead State University, Moorhead, Minnesota.
- Beachy, C.K., and K. Touzinsky. 1999. Decoupling of a hormone antagonism and loss of metamorphic flexibility in *Bufo americanus*. Joint annual meeting of Ichthyologists and Herpetologists. Pennsylvania State University, State College, Pennsylvania.
- Beachy, C.K., and R. Č. Bruce. 1999. Miniaturization in *Desmognathus quadramaculatus* is due to accelerated maturation. Joint annual meeting of Ichthyologists and Herpetologists. Pennsylvania State University, State College, Pennsylvania.
- Beachy, C.K., and R. C. Bruce. 1998. Miniaturization in the black-bellied salamander (*Desmognathus quadramaculatus*) through acceleration of metamorphosis and maturation. Fourth Highlands Conference on the Biology of Plethodontid Salamanders, Highlands Biological Station, Highlands, North Carolina.
- Beachy, C. K., T. H. Surges, and M. Reyes. 1997. Effects of developmental and growth history on metamorphosis in the grey treefrog, *Hyla versicolor* (Amphibia, Anura). Joint annual meeting of Ichthyologists and Herpetologists. University of Washington, Seattle, Washington.
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- Beachy, C. K. 1995. Possible sexual isolation between parapatric populations of the salamander *Gyrinophilus porphyriticus* in the Cowee Mountain, North Carolina. Annual Meeting of the Society for the Study of Amphibians and Reptiles. Appalachian State University, Boone, North Carolina.
- Beachy, C. K. 1994. The courtship behavior of the plethodontid salamander *Gyrinophilus porphyriticus*. Joint annual meeting of Ichthyologists and Herpetologists. University of Georgia, Athens, Georgia.
- Bruce, R. C., C. K. Beachy, P. G. Lenzo, S. P. Pronych, and R. J. Wassersug. 1993. Lung reduction in amphibian larvae an an adaptation to flowing water. Second World Congress of Herpetology. Adelaide, Australia.
- Beachy, C. K. 1992. Life history evolution in biphasic salamanders: constraints and hypotheses for the family Plethodontidae. Annual meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society of Systematic Zoology. University of California, Berkeley, California.
- Beachy, C. K., and J. Bernardo. 1992. Life history evolution in biphasic plethodontids, I: larval traits, age at metamorphosis, and direct-development. Third Highlands Conference on the Biology of Plethodontid Salamanders, Highlands Biological Station, Highlands, North Carolina.
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- Smith, D. G., S. R. Voss, C. K. Beachy, and D. G. Heckel. 1992. Allozyme variation in

- geographically isolated populations of the shovelnose salamander, *Leurognathus marmoratus*. Third Highlands Conference on the Biology of Plethodontid Salamanders, Highlands Biological Station, Highlands, North Carolina.
- Beachy, C. K. 1991. Habitat shifts, size-specific predation, and life history evolution in larval salamanders of the family Plethodontidae. Annual meeting of the American Society of Zoologists, Atlanta, Georgia.
- Beachy, C. K. 1991. Behavioral indices of aggression and submission in the larval plethodontid salamander, *Eurycea wilderae*. Joint Meeting of the Society for the Study of Reptiles and Amphibians and the Herpetologists' League. Pennsylvania State University, State College, Pennsylvania.
- Beachy, C. K. 1990. Guild regulation in larval salamanders of the family Plethodontidae. Annual meeting of the American Society of Zoologists, San Antonio, Texas.
- Beachy, C. K., and R. C. Bruce. 1990. The origin of lunglessness in plethodontid salamanders. Joint Meeting of the Society for the Study of Reptiles and Amphibians and the Herpetologists' League. Tulane University, New Orleans, Louisiana.
- Beachy, C. K. 1989. Egg size variation in several species of salamanders. First World Congress of Herpetology. University of Canterbury, Kent, England.

## Presentations by research students and assistants

- Bierbaum, E. 2018. Comparative morphology of hand and foot skeletal elements in *Amphiuma* salamanders. Annual meeting of the Louisiana Academy of Science. LSU-Alexandria.
- Erdmann, J.A. 2017. The function of toe movement in feeding by the Gulf Coast Toad (*Incillius nebulifer*). Joint annual meeting of Ichthyologists and Herpetologists. Austin, Texas.
- Partin, M. 2017. Corticosterone and neutrophil/lymphocyte ratios in male Cope's Gray Treefrogs (*Dryophytes chrysocelis*) in the presence of traffic noise. Joint annual meeting of Ichthyologists and Herpetologists. Austin, Texas.
- Radi, A. 2012. Under-ice activity patterns in western tiger salamanders, *Ambystoma mavortium*. World Congress of Herpetologists and Joint Annual meeting of Ichthyologists and Herpetologists. University of British Columbia, Vancouver.
- Radi, A. 2012. Under-ice activity patterns in western tiger salamanders, *Ambystoma mavortium*. Annual meeting of the Dakota Amphibian and Reptile Network. Black Hills State University, Spearfish, South Dakota.
- Radi, A. 2012. Under-ice activity patterns in western tiger salamanders, *Ambystoma mavortium*. Annual meeting of the North Dakota Academy of Science. Bismarck.
- Sweet, J, and A. Roise. 2009. An analysis of sex differences in cloacal and skin pH in *Ambystoma mexicanum* (axololt) salamanders. 2009 North Dakota INBRE Annual Symposium for Undergraduate Research. University of North Dakota, Grand Forks.
- Modrow, H. 2008. Diet of tiger salamanders in North Dakota, with implications for flow of heavy metals through wetland food webs. Joint annual meeting of Ichthyologists and Herpetologists. McGill University and Concordia University, Montreal, Quebec.
- Modrow, H. 2008. Diet of tiger salamanders in North Dakota, with implications for flow of heavy metals through wetland food webs. Annual meeting of the North

- Dakota Academy of Science, University of North Dakota, Grand Forks.
- K.C. Cabarle, F.D. Henry, and J. Entzel. 2006. Experimental analysis if RFID antennas in herpetological studies using PIT tagged salamanders (*Ambystoma tigrinum*). 3<sup>rd</sup> Annual Northern Plains Biological Symposium, North Dakota State University, Fargo.
- Junglas, K. 2005. The assessment of the northern leopard frog (*Rana pipiens*) population at Upper Souris National Wildlife Refuge Annual meeting of the North Dakota Academy of Science, University of North Dakota.
- Langer, W. 2002. Wing morphology and flight performance in dabbling ducks (*Anas*). Annual meeting of the North Dakota Academy of Science, University of North Dakota.
- Barker, E. L., and C. A. Hein. 2000. Effects of food and temperature on metamorphic timing of *Desmognathus quadramaculatus*. Joint annual meeting of the North Dakota Academy of Science, South Dakota Academy of Science, and Minnesota Academy of Science. Minnesota State University, Moorhead, Minnesota.
- Reyes, M. 1997. Development of feeding preference in newborn gartersnakes, *Thannophis sirtalis*. Annual meeting of the Iowa Academy of Science. Clarke College, Dubuque, Iowa.

#### Other

MS student James Erdmann, 2017 First prize, Graduate Student Research Symposium, University of Louisiana, Lafayette

Research student Markus Wilson, 2013 First prize in Denison Undergraduate Research Competition, North Dakota Academy of Science

# (\*\*\*Markus is the only repeat-winner of this award in the history of the NDAS\*\*\*)

Research student Markus Wilson, 2012 First prize in Denison Undergraduate Research Competition, North Dakota Academy of Science

Research student Francis Drew Henry, 2006 runner-up in Denison Undergraduate Research Competition, North Dakota Academy of Science

Research student Justin Andrist, 2001 runner-up in Denison Undergraduate Research Competition, North Dakota Academy of Science

Research students Cari (Hein) Hickerson and Evan Barker, 2000 recipients of the Outstanding Student Achievement Award, Division of Science, Minot State University

#### **Service (selective listing)**

Chair, Council of Department Heads, 2015-2017

Director, MSU DarwinDay, 2009, 2010, 2011, 2013

Search Committee, Plant Biologist 2009

Tenure Committee, Minot State University, 2008-2011 (chair, 2009-2011)

Search committee, Vice-President for Academic Affairs, 2005, 2006

Search committee chair, Plant Biologist 2005

Search committee chair, Microbial Ecologist, 2004

Chair, Department of Biology, 2004 -- 2007

Search committee, Vertebrate Functional Morphologist, 2002

Search committee, Molecular Biologist, 1999 Search committee (chair), Vertebrate Functional Morphologist, 1999 Faculty Senate, Minot State University, 1999-2002, 2003-2006 Promotion Committee, Minot State University, 2001-2003 Secretary, Faculty Senate, Clarke College, 1996-1998 Search committee, Cell biologist, Clarke College, 1995 Search committee, Neuroanatomist, Clarke College, 1995 Search committee, Microbiologist, Clarke College, 1996

#### Other stuff...

2016, Spring, Mandeville Soccer Association, over 30 tournament championship 2006, First place (with Joe Super), greased pig wrestling, 2006 North Dakota State Fair 2005, Third place (with Joe Super), greased pig wrestling, 2005 North Dakota State Fair 2003-current: approximately 25 racquetball tournament places (1st-3st)

#### References

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