

# Neil C. Aschliman, Ph.D.

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## EDUCATION

Ph.D., Biological Sciences. Florida State University, Tallahassee, Florida; 2005 – 2011.

*Dissertation topic:* The Batoid Tree of Life: Recovering the Patterns and Timing of the Evolution of Skates, Rays and Allies (Chondrichthyes: Batoidea). Defense 2 Jun. 2011. *Co-advisors:* Dr. Gavin J. P. Naylor, Dr. Scott J. Steppan.

Bachelor of Science, Zoology. Summa cum laude. Foundation Honors. Texas A&M University, College Station, Texas; 2001 – 2005. GPR 3.976.

## TEACHING EXPERIENCE AT SAU

BIOL-101 (4 cr.): Principles of Biology with laboratory; 2 sections.

BIOL-201 (4 cr.): Diversity of Living Systems with laboratory; 3 sections.

BIOL-230 (4 cr.): Human Anatomy and Physiology I [BIOL-202 prior to 2016]; 16 sections.

BIOL-230L (0 cr.): Human Anatomy and Physiology I Laboratory [BIOL-202L prior to 2016]; 14 sections.

BIOL-232 (4 cr.): Human Anatomy and Physiology II [BIOL-204 prior to 2017]; 10 sections.

BIOL-232L (0 cr.): Human Anatomy and Physiology II Laboratory [BIOL-204L prior to 2017]; 12 sections.

HON-201/BIOL-223 (3 cr.): The Vertebrate Story; 1 section.

WI-BIOL-300 (3 cr.): Writing-Intensive Introduction to Biological Literature and Communication; 4 sections.

BIOL-401 (1 cr.): Biological Research I; 2 sections.

BIOL-402 (1 cr.): Biological Research II; 2 sections.

NSS-101 (1 cr.): New Student Seminar; 1 section.

## TEACHING AWARDS

Faculty of the Month; Mar. 2016. St. Ambrose University.

Outstanding Teaching Assistant Award (OTAA); 2007. Florida State University.

Renomination\*, OTAA; 2010. Florida State University. *\*Cannot win twice.*

## PRESENTATION AWARDS

Frederick H. Stoye Award, General Ichthyology [*best student paper*], American Society of Ichthyologists and Herpetologists. Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island; 10 Jul. 2010.

Superior Poster Presentation Award [*top prize*], Sigma Xi Scientific Research Society annual meeting, Montreal, Quebec, Canada; 12 – 13 Nov. 2004.

## RESEARCH EXPERIENCE

Ph.D. program in Biological Sciences, Florida State University, Tallahassee, Florida; 2005 – 2011.

Research Assistant to Dr. John McEachran, Texas A&M University, College Station, Texas; 2002 – 2005.

Research Assistant to Dr. Bruce Riley, Texas A&M University, College Station, Texas; 2004 – 2005.  
Research Training Program (RTP) Fellow for Dr. Bruce Collette, Smithsonian Institution, National Museum of Natural History, Washington, D.C.; May – Aug. 2004.  
Research Experiences for Undergraduates (REU) Intern for Dr. Jim Gelsichter, Center for Shark Research, Mote Marine Laboratory, Sarasota, Florida; May – Aug 2003.  
Research Assistant, various cruises.

### RESEARCH PROPOSAL AWARDS

National Science Foundation Graduate Research Fellowship, Honorable Mention; 2006, 2007.

### GRANTS AND FELLOWSHIPS

St. Ambrose University:

Faculty Development Committee conference presentation travel grant; 2013.

Council for an Integrative Learning Environment Integrative Learning Grant; 2013.

Teaching assistantship, Florida State University Department of Biology; 2005 – 2011.

Travel grant, American Society of Ichthyologists and Herpetologists. Funding to attend the Joint Meeting of Ichthyologists and Herpetologists in Providence, Rhode Island; Jul. 2010.

Travel grant, American Elasmobranch Society. Funding to attend the Joint Meeting of Ichthyologists and Herpetologists in Portland, Oregon; Jul. 2009.

Fellowship, National Science Foundation East Asia and Pacific Summer Institutes. Host: Prof. Mutsumi Nishida, Ocean Research Institute (ORI), University of Tokyo, Tokyo, Japan. Funding for 2.5 months of residence at the ORI to study batoid mitochondrial genomics, Jun. – Aug. 2007.

Travel grant, Texas A&M College of Science, Office of Professional School Advising, Honors Department, Office of the Vice President for Research. Funding to attend the annual meeting of the Sigma Xi Scientific Research Society in Montreal, Quebec, Canada; Oct. 2004.

Fellowship, Alice Eve Kennington Endowment; Research Training Program fellowship at the National Museum of Natural History, Washington, D.C.; May – Aug. 2004.

Fellowship, National Science Foundation # OCE0139392; Research Experience for Undergraduates fellowship at Mote Marine Laboratory, Sarasota, Florida; May – Aug. 2003.

### REFEREEING

National Science Foundation, *Journal of Morphology*, *Molecular Phylogenetics and Evolution*, *Journal of Fish Biology* (x5), *Zoological Journal of the Linnean Society* (x3), *GENE*, *Deep Sea Research II*, *Marine Biodiversity Records*, *Marine Freshwater Research*, *African Journal of Marine Science*, *Memoirs of Museum Victoria*, *Ichthyological Research*, *Evolution & Development*.

### ACTIVE SOCIETY MEMBERSHIPS

Member of the American Society of Ichthyologists and Herpetologists since 2002.

Associate member of the Japan Society for the Promotion of Science since 2007.

Member of the Society of Systematic Biologists since 2011.

Member of the American Association for the Advancement of Science since 2012.

Member of the National Center for Science Education since 2015.

Subscriber to the National Center for Case Study Teaching in Science database since 2015.

### JOURNAL ARTICLES

R.W. Stein, C.G. Mull, T.S. Kuhn, N.C. Aschliman, L.N.K. Davidson, J.B. Joy, G.J. Smith, N.K. Dulvy, and A.O. Mooers. Global Priorities for conserving the evolutionary history of sharks, rays, and chimaeras. *Submitted for review Dec. 2016 to Nature Ecology & Evolution*.

Neil C. Aschliman. 2014. Interrelationships of the durophagous stingrays (Batoidea: Myliobatidae). *Environmental Biology of Fishes* 97(9):967-979. doi: 10.1007/s10641-014-0261-8

- Neil C. Aschliman, Mutsumi Nishida, Masaki Miya, Jun G. Inoue, Kerri M. Rosana and Gavin J.P. Naylor. 2012. Body Plan Convergence in the Evolution of Skates and Rays (Chondrichthyes: Batoidea). *Molecular Phylogenetics and Evolution* 63:28-42.
- Neil C. Aschliman, David A. Ebert, and Leonard J.V. Compagno. 2010. Redescription of *Cruriraja 'parcomaculata'* sensu Smith, 1964 (Rajoidei: Anacanthobatidae), a new legskate from Southern Africa. *Copeia* 2010(3):364-372.
- Neil C. Aschliman, Ian R. Tibbetts and Bruce B. Collette. 2005. Relationships of sauries and needlefishes (Teleostei: Scomberesocoidea) to the internally fertilizing halfbeaks (Zenarchopteridae) based on the pharyngeal jaw apparatus. *Proceedings of the Biological Society of Washington* 118(2):416-427.

### BOOKS AND BOOK CHAPTERS

- Neil C. Aschliman, Kerin M. Claeson and John D. McEachran. Phylogeny of Batoidea. 2012. Reviewed chapter. Pp. 57 – 95 in *Biology of Sharks and Their Relatives, Edition 2*. J.C. Carrier, J.A. Musick and M.R. Heithaus (eds.). CRC Press.
- Neil C. Aschliman and David A. Ebert. [four chapters on elasmobranchs]. *In prep* for *Fishes of the Western Indian Ocean*. P.C. Heemstra and J.E. Randall (eds.).
- David A. Ebert and Neil C. Aschliman. [three chapters on elasmobranchs]. *In prep* for *Fishes of the Western Indian Ocean*. P.C. Heemstra and J.E. Randall (eds.).
- Neil C. Aschliman. 2011. Doctoral dissertation. *The Batoid Tree of Life: Recovering the Patterns and Timing of the Evolution of Skates, Rays and Allies (Chondrichthyes: Batoidea)*. Florida State University, Tallahassee, Florida. 184 pp.
- G.J.P. Naylor and N. Aschliman. How many species of living sharks, skates and rays are there, and how did they arise over the course of evolution? *In Proceedings of the International Symposium on Reproduction in Marine Organisms*. Uchida and Sato (eds.). Okinawa Press.
- John D. McEachran and Neil Aschliman. 2004. Phylogeny of Batoidea. Pp. 79 – 113 in *Biology of Sharks and Their Relatives*. J.C. Carrier, J.A. Musick and M.R. Heithaus (eds.). CRC Press.

### INVITED PRESENTATIONS

- The Batoid Story: Convergence and Catastrophe in the Evolution of Skates and Rays. *Invited speaker*. Department of Biology rEvolutionary Research Club. University of Iowa, Iowa City, Iowa; 28 Apr. 2017.
- T-Rex vs. Leviathan: Biology and Theology of Monsters. Neil Aschliman and Micah Kiel. *Invited speaker*. College of Arts and Sciences Liberal Arts Lecture. St. Ambrose University, Davenport, Iowa; 16 Apr. 2015.
- Evolution of the durophagous stingrays (Batoidea: Myliobatidae). *Invited symposium speaker*. Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, New Mexico; 12 Jul. 2013.
- Molecular systematics of stingrays and allies (Batoidea: Myliobatiformes). *Invited speaker*. Ocean Research Institute, University of Tokyo. Tokyo, Japan; 2 Jul. 2007.
- Better living through phylogenetics! -or- Diversity and constraint in the evolution of skates and rays. *Invited speaker*. Summer Seminar Series. Mote Marine Laboratory, Sarasota, Florida; 26 May 2006.

### FIRST-AUTHORED PAPER PRESENTATIONS

Eleven total. Selected presentations:

- \*A new framework for interpreting the evolution of skates and rays (Chondrichthyes: Batoidea). Joint Meeting of Ichthyologists and Herpetologists. Providence, Rhode Island; 10 Jul. 2010. \*Winner of the Frederick H. Stoye Award, *General Ichthyology [best student paper]*.
- The Batoid Tree of Life: Recovering the Patterns and Timing of the Evolution of Skates, Rays and Allies (Chondrichthyes: Batoidea). Dissertation Defense, Florida State University, Tallahassee, Florida; 2 Jun. 2011.
- Diversity and constraint in the evolution of skates and rays. Ecology and Evolution Seminar, Florida State University, Tallahassee, Florida; 20 Mar. 2009.

Diversity and constraint in the evolution of skates and rays (Chondrichthyes: Batoidea). Ocean Research Institute, University of Tokyo. Tokyo, Japan; 20 Aug. 2007.

#### FIRST-AUTHORED POSTER PRESENTATIONS

Eight total. Selected presentations:

The Batoid Tree of Life: Synthesizing Morphological And Molecular Phylogenies of Skates, Rays And Allies (Chondrichthyes: Batoidea). Joint Meeting of Ichthyologists and Herpetologists. Minneapolis, Minnesota; 9 Jul. 2011.

Molecular phylogeny of stingrays and allies (Batoidea: Myliobatiformes) using nuclear and mitochondrial DNA sequence data. Southeastern Ecology and Evolution Conference (SEEC), Florida State University, Tallahassee, Florida; 29 Mar. 2008.

Reconstructing the interrelationships of skates and rays (Chondrichthyes: Batoidea) using mitochondrial genomes. NSF/JSPS EAPSI Program Poster Session. Sokendai Graduate University for Advanced Studies, Hayama, Japan; 15 Jun. 2007.

\*Relationships of sauries and needlefishes (Teleostei: Scomberesocidae) to the internally fertilizing halfbeaks (Zenarchopteridae) based on the pharyngeal jaw apparatus. Sigma Xi Scientific Research Society Annual Meeting. Montreal, Quebec, Canada; 12 – 13 Nov. 2004. \**Winner of the Superior Poster Presentation Award [top prize]*.

#### MENTORED UNDERGRADUATE PRESENTATIONS

An analysis of the practicality and effectiveness of UV irradiation as a treatment method for 17- $\beta$  estradiol. Issac Schwantes (student presenter), Joshua Stratton, and *Neil Aschliman*. 2016 College of Arts and Sciences Undergraduate Scholars Conference. St. Ambrose University; 28 Apr. 2016.

An analysis of the practicality and effectiveness of UV irradiation as a treatment method for 17- $\beta$  estradiol. Issac Schwantes (student presenter), Joshua Stratton, and *Neil Aschliman*. 128<sup>th</sup> Annual Meeting of the Iowa Academy of Science. Grand View University, Des Moines, Iowa; 23 Apr. 2016.

Potential adverse effects of active ingredients in sunscreen on the behavior and histology of zebrafish (*Danio rerio*). Henri Alexandre Giblot Ducray (student presenter) and *Neil Aschliman*. 2015 College of Arts and Sciences Undergraduate Scholars Conference. St. Ambrose University; 24 Apr. 2015.

An evaluation of the use of DNA barcode sequences to improve the phylogenetic resolution of hardnose skates (Chondrichthyes: Rajinae). Averi Wilson (student presenter) and *Neil Aschliman*. 2014 College of Arts and Sciences Undergraduate Scholars Conference. St. Ambrose University; 24 Apr. 2014.

#### OTHER PRESENTATIONS / PUBLISHED ABSTRACTS

Using trees to save sharks and rays. Nicholas Dulvy (presenter), Will Stein, Chris Mull, Tyler Kuhn, *Neil Aschliman*, Lindsay Davidson, Jeff Joy, Gordon Smith, and Arne Mooers. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, Louisiana; 10 Jul. 2016.

Using trees to save sharks and rays. Nicholas K. Dulvy (presenter), R. Will Stein, Chris G. Mull, Tyler S. Kuhn, *Neil C. Aschliman*, Lindsay N.K. Davidson, Jeff B. Joy, Gordon J. Smith, and Arne  $\emptyset$  Mooers. Northeastern Pacific Shark Symposium 2016. USC Wrigley Marine Science Center, Catalina Island, California; 18 Mar. 2016.

The role of guitarfish in the origin of skates and rays. K.M. Claeson (presenter), *N.C. Aschliman* and C.J. Underwood. Society for Integrative and Comparative Biology Annual Meeting. Austin, Texas; 4 Jan. 2014.

Guitarfish parphyly and the origin of skates and rays: estimating accumulation rates of vertebral fusion among batoid fishes. K.M. Claeson (presenter), *N.C. Aschliman* and C.J. Underwood. Society of Vertebrate Paleontology Annual Meeting. Raleigh, South Carolina; 19 Oct. 2012.

#### ELECTED POSITIONS

\*Member, Faculty Handbook Committee. St. Ambrose University; 2016 – current. \**Elected Chair, 2017 – 2018*.

\*Member, Board of Studies. St. Ambrose University; 2014-16. *\*Elected Chair, 2015 – 2016.*  
\*Member, University Life Committee. St. Ambrose University; 2012-2014. *\*Elected Chair, 2013 – 2014.*  
President, Ecology and Evolution Research Discussion Group (EERDG). Florida State University; Apr. 2009 – Aug. 2010.  
\*Secretary, Ecology and Evolution Research Discussion Group (EERDG). Florida State University; May 2008 – Apr. 2009. *\*Developed society website at <http://bio.fsu.edu/~eerdg>*  
Graduate Student Representative for Ecology & Evolutionary Biology, Integrating Genotype and Phenotype faculty cluster hire initiative. Florida State University; Nov. 2007 – May 2008. Nominated and confirmed.

### SERVICE AT SAU

\*Member, Faculty Handbook Committee; 2016 – current. *\*Committee Chair Jun. 2017 – current.*  
Member, Faculty Evaluation of Administrators Committee; Nov. 2016 – current.  
\*Member, Board of Studies; 2014 – 2016. *\*Committee Chair Jun. 2015 – Jun. 2016.*  
\*Member, University Life Committee; 2012 – 2014. *\*Committee Chair Apr. 2013 – May 2014.*  
Advisor, University League of Legends; 2016 – current.  
Advisor, Doctors to Bee; 2014 – current.  
Co-advisor, Biology Club; 2011 – current.  
Organizer, Early Career Faculty Events; 2012 – current.  
Manager, SAU Biology webpage; 2012 – current.  
Advisor, Fighting Bee Jiu-jitsu; 2011 – 2014.  
Member, Psychology Search Committees x2 (2 positions); Spring 2014, Fall 2014.  
Member, Mechanical Engineering Search Committees x2 (3 positions); Spring 2014, Fall 2014.  
Study Abroad Regional Advisor (SARE); 2011 – current.  
Member, Faculty Handbook Review Committee; 2012.  
Member, Cadaver Laboratory Selection Committee; 2012 – 2013.  
Member, Nursing Search Committee (2 positions); 2012.  
Member, Assessment and Evaluation Advisory Board; 2011 – 2012.

### PUBLISHED ILLUSTRATIONS

Perciformes key. John D. McEachran. Pp. 85 – 96 in Fishes of the Gulf of Mexico volume 2. John D. McEachran and Janice D. Fechhelm. University of Texas Press. 2005. Produced line drawing of Moronidae on p. 92.  
Hormonal regulation of elasmobranch physiology. James Gelsleichter. Pp. 287 – 323 in Biology of Sharks and Their Relatives. Editors J.C. Carrier, J.A. Musick, M.R. Heithaus. CRC Press. 2004. Produced raw line drawings on pp. 289, 293 – 294, 296, 299, 301.  
\*Illustrations and cartoons may be commissioned for published works or presentations.  
Sample: “Zoloft Shark” for Jim Gelsleichter, UNF.  
<http://www.iceandshadows.com/art/fivefathoms/ZoloftShark.jpg>

### OUTREACH

Author of the biology outreach blog This reView of Life, <http://thisreviewoflife.blogspot.com>; Apr. 2010 – current.  
Guest post on manta rays and taxonomy, Southern Fried Science, <http://www.southernfriedscience.com/?p=15248>; Jul. 2013.  
Host area high school biology students in the cadaver lab; 2011 – current.  
Run, plan, and/or assist with youth STEM programs at LeClaire Community Library; 2013 – current.  
Invited panelist, “Directing Your Journey,” Black Graduate Student Association (BGSA) Linkages Symposium. Florida State University; 9 Apr. 2011.  
Judge, Zoology, Capital Regional Science and Engineering Fair. Florida State University; 2008 – 2010.

### TEACHING / OUTREACH TRAINING

National Center for Case Study Teaching in Science Summer Workshop; University at Buffalo, May 2014.  
Teaching Science to Maximize Learning and Retention (BSC5936); Florida State University; Spring 2011.  
COMPASS Media Training Workshop: "Meet the Press: Opportunities and Challenges for Scientists in a Changing World"; Apr. 2010.  
FSU Department of Biological Science Teaching Workshop; Aug. 2005 [one-week program].

### HONORS

Finalist, University Fellowship, Florida State University; 2007.  
Selected societies: Phi Beta Kappa Honor Society, 2005; Sigma Xi Associate Membership; 2005.  
Dean's Honor Roll; 2001, 2002, 2003, 2004, 2005.