

# Kevin Flaherty

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## Education

- 2018** **Ph.D.**, *Pennsylvania State University*, State College, PA.  
(Anticipated) Department of Anthropology  
Dissertation title: *Modeling developmental timing changes in human evolution*  
Ph.D. adviser: Joan Richtsmeier
- 2013** **M.A.**, *Pennsylvania State University*, State College, PA.  
Department of Anthropology  
Thesis title: *Genetic and cellular mechanisms of craniosynostosis in cranial vault sutures*  
M.A. adviser: Joan Richtsmeier
- 2009** **B.A.**, *University of Iowa*, Iowa City, IA.  
Major: Anthropology

## Vocational Experience

- 2017–2017** **Teaching Assistant**, *Department of Biology*, Pennsylvania State University.  
○ Biology 497: Advanced Human Anatomy: Cadaver Lab
- 2012–2016** **Teaching Assistant**, *Department of Anthropology*, Pennsylvania State University.  
○ Anthropology 410: Osteology  
○ Anthropology 466: The Skull  
○ Anthropology 002: Introduction to Archaeology  
○ Anthropology 021: Introduction to Biological Anthropology
- 2013–2017** **Research Assistant**, *Department of Anthropology*, Pennsylvania State University.  
○ Lab Manager in charge of training and supervising undergraduate research assistants  
○ Timed transgenic mouse breeding and embryo collection  
○ Light and two photon microscopic imaging of bone cells and ossification centers using GFP and fluorescent chromophores  
○ Statistical analysis of data using R  
○ Landmark data collection and morphometric analysis of data from micro-computed tomography scans  
○ Developmental age staging of mouse embryos  
○ Design and production of scientific figures using Adobe Illustrator and Photoshop  
○ Organized and hosted seminars on use of Illustrator for graduate students

## Publications

- 2017** Musy, M.; Flaherty, K.; Raspopovic, J.; Robert, A.; Richtsmeier, J.T.; and Sharpe, J. *A quantitative method for staging mouse embryos*  
Accepted by *Development*
- 2016** Flaherty, K.; Singh, N.; and Richtsmeier, J.T. *Understanding craniosynostosis as a growth disorder*. **Wiley Interdisciplinary Reviews: Developmental Biology** 5, 429–459
- 2013** Richtsmeier, J.T. and Flaherty, K. *Hand in glove: brain and skull in development and dysmorphogenesis*. **Acta Neuropathologica** 125, 469–489

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## Invited Lectures

- *Head and Neck Embryology*. Biology 497: Advanced Anatomy: Cadaver Lab with Dr. Nicole Squyres, Pennsylvania State University. Given Dec 2017
- *Human and Primate Brain Evolution*. Neuroscience 512: Comparative Neuroanatomy with Dr. Kevin Alloway, Pennsylvania State University. Given Dec 2017, Dec 2016, Dec 2015, Dec 2014
- *eMOSS: Providing the Temporal Context to Embryological Research with Mice*. Given at the 11th Annual Structural Birth Defects Meeting, Bethesda, MD on April 5th, 2017
- *Introduction to the Cranial Nerves*. Biology 497: Advanced Anatomy: Cadaver Dissection with Dr. Nicole Squyres, Pennsylvania State University. Given Apr 2017
- *Craniofacial Development*. Anthropology 468: Evolution and Development of Human Origins with Dr. Philip Reno, Pennsylvania State University. Given Mar 2014, Mar 2013
- *Introduction to the Skull and Craniofacial Development*. Anthropology 425: Zooarchaeology with Dr. Sarah McClure, Pennsylvania State University. Given Nov 2014, Mar 2016, Mar 2017
- *Neural Crest and Mesoderm in Craniofacial Development*. Anthropology 466: The Skull with Dr. Joan Richtsmeier, Pennsylvania State University. Given Mar 2016
- *Bone and Cartilage Development*. Anthropology 466: The Skull with Dr. Joan Richtsmeier, Pennsylvania State University. Given Mar 2016
- *Introduction to Adobe Illustrator and Creating Scientific Figures*. Department of Anthropology workshop, Pennsylvania State University. Given Mar 2016, Sep 2016, Nov 2016

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## Awards and Accolades

- National Science Foundation, Doctoral Dissertation Improvement Grant recipient in Biological Anthropology 2017. Award number: NSF BCS-1650824
- William T. Sanders Graduate Award, Department of Anthropology, Pennsylvania State University, 2017
- Travel Award, American Association of Anatomists, Experimental Biology Meeting, Chicago, IL, 2017
- Trainee Travel Award, Structural Birth Defects Meeting, Bethesda, MD, 2017
- Graduate student poster contest, 3rd place, Society for Craniofacial Genetics and Developmental Biology Meeting, Boston, MA, 2016
- University Graduate Fellowship awardee, Pennsylvania State University, 2011-2016

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## Poster Presentations

- 2018 ○ Flaherty, Kevin; Halmi, Caroline; Richtsmeier, Joan. *controlling and Contextualizing Inter-Individual Variation in Murine Embryos E10-E15*. given at the Craniofacial Morphogenesis and Tissue Regeneration Gordon Research Seminar, Barga, Italy
- 2017 ○ Flaherty, Kevin; Defonzo, Alessandra; Richtsmeier, Joan. *Precise temporal characterization of early ossification center appearance using Osx-GFP*. Given at the annual meeting of the Society for Craniofacial Genetics and Developmental Biology, Minneapolis, MN
  - Flaherty, Kevin; Musy, Marco; Sharpe, James; Richtsmeier, Joan. *eMOSS: A High Resolution Staging System for Mouse Embryos Aged E09-E15*. Given at the annual meeting of the American Association of Anatomists, Chicago, IL
- 2016 ○ Flaherty, Kevin and Richtsmeier, Joan. *Understanding the factors that contribute to size variation in C57Bl/6 mouse embryos from E12-E16*. Given at the annual meeting of the Society for Craniofacial Genetics and Developmental Biology, Boston, MA
  - Flaherty, Kevin; Mazzocco, Vivianne; Richtsmeier, Joan. *Developmental age and size variation in mouse embryos from embryonic days 12-16 as a window to heterochronic processes*. Given at the annual meeting of the American Association of Physical Anthropologists, Atlanta, GA
- 2015 ○ Flaherty, Kevin; Mazzocco, Vivianne; Richtsmeier, Joan. *Asynchrony Between Developmental Age and Chronological Age in Mouse Embryos*. Given at the annual meeting of the Society for Craniofacial Genetics and Developmental Biology, Baltimore, MD
  - Flaherty, Kevin; Musy, Marco; Sharpe, James; Richtsmeier, Joan. *Patterns of asynchrony between developmental age and chronological age in utero*. Given at the annual meeting of the American Association of Physical Anthropologists, St. Louis, MO

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## Relevant Graduate Coursework

- BIOL 400: *Teaching Biology* (2017)
- ANTH 596: *Cadaver Dissection* (2017)
- ANTH 597A: *Human Anatomy* (2016)
- ANTH 497: *3D Imaging in Anthropology* (2016)
- BIOL 497C: *Comparative Neuroanatomy* (2014)
- BIOL 497C: *Developmental Neurobiology* (2014)
- ANTH 466: *The Skull* (2013)
- BIOL 430: *Developmental Biology* (2013)

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## Computer Skills

- Basic** Avizo, ImageJ, Linux Environment, MacOS environment  
**Intermediate** R, L<sup>A</sup>T<sub>E</sub>X, Excel, Access, Adobe InDesign, Microsoft Windows Environment  
**Advanced** Adobe Illustrator, Adobe Photoshop, Word, Powerpoint

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## Service

- 2018** Co-created and led weekly pedagogy interest group in PSU anthropology department
- 2017** Established graduate student led after-school class for State College Area School District's Community Education Extended Learning (CEEL) Program
- 2016** Vice president of Anthropology Graduate Student Association (AGSA)
- 2016** Established ongoing academic relationship with visiting Nigerian doctoral student
- 2014–2017** Mentored four undergraduate students in data collection and analysis, resulting in presentation of original research
- 2014** President of Anthropology Graduate Student Association (AGSA)
- 2014** Established ongoing collaborative educational partnership between Penn State Anthropology Department and State College Area School District to provide educational opportunities in anthropology for English as a Second Language students and local K-5<sup>th</sup> grade students
- 2012–2015** Head of Penn State Anthropology *Bring Your Daughters and Sons to Work Day* program

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## Professional Development

- Co-created and led pedagogy interest group in Penn State Department of Anthropology, 2018
- Completed BIOL 400: Teaching in Biology, a course focused on evidence-based teaching methods, 2017
- Attended Teaching Portfolio workshop at a regional meeting of the American Association of Anatomists, 2017
- Attended Teaching Philosophy Statement workshop organized by the Graduate Women in Science at Penn State, 2017
- Attended Creating a Syllabus workshop organized by Penn State Department of Anthropology and Schreyer Institute for Teaching Excellence, 2015

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## References

### Joan Richtsmeier

- Dissertation adviser
- Pennsylvania State University
- ☎ (814) 863-0562
- ✉ [jta10@psu.edu](mailto:jta10@psu.edu)

### Nicole Squyres

- Anatomy professor
- Pennsylvania State University
- ☎ (814) 867-2896
- ✉ [nss28@psu.edu](mailto:nss28@psu.edu)

### Kevin Alloway

- Neuroanatomy professor
- Pennsylvania State University
- ☎ (814) 867-6413
- ✉ [kda1@psu.edu](mailto:kda1@psu.edu)

### Kevin Flaherty

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