

CHARITY G. OWINGS

CURRICULUM VITAE

CONTACT INFORMATION

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EDUCATION

- **Doctor of Philosophy**, Expected graduation: Spring 2018
Indiana University-Purdue University Indianapolis (IUPUI), Indianapolis, IN
Major: Biology
Focus: Forensic entomology, molecular genetics of carrion arthropods
Dissertation: "Characterization and population genetic structure of mites and beetles associated with vertebrate decomposition" (*tentative title*)
Academic Advisor and Committee Chair: Christine J. Picard, Ph.D.
GPR: N/A
- **Master of Science**, December 2012
Texas A&M University, College Station, TX
Major: Entomology
Focus: Decomposition ecology and forensic entomology
Thesis: "Developmental plasticity of *Cochliomyia macellaria* Fabricius (Diptera: Calliphoridae) from three distinct ecoregions in Texas"
Academic Advisor and Committee Chair: Jeffery K. Tomberlin, Ph.D.
GPR: 3.740/4.000
- **Bachelor of Science**, December 2010
Texas A&M University, College Station, Texas
Major: Forensic and Investigative Sciences
Double Major: Entomology
Minor: Anthropology
GPR: 3.659/4.000
- **Associate of Science**, May 2008
Kilgore College, Kilgore, Texas
Major: Biology, Pre-Medical
GPA: 3.89/4.00

EMPLOYMENT AND TEACHING EXPERIENCE

- **Summer 2014- Present:** Graduate Student Researcher; Indiana University-Purdue University Indianapolis, Indianapolis, IN
- **Fall 2013-April 2014:** Substitute Teacher; Kilgore Independent School District, Kilgore, TX, and Pine Tree Independent School District, Longview, TX
- **Spring 2013:** OPS Hourly Non-Secretary/Clerk; University of Florida, College of Medicine, Department of Pathology, Gainesville, FL
- **Spring 2011-Fall 2012:** Graduate Teaching Assistant; Texas A&M University, College of Agriculture and Life Sciences, Department of Entomology, College Station, Texas
 - **Fall 2012, FIVS 205:** *Introduction to Forensic Science*
 - **Spring 2012, FIVS 432:** *Forensic Entomology Laboratory*
 - **Spring 2012, ENTO 423:** *Medical Entomology Laboratory*
 - **Fall 2011, ENTO 305:** *Evolution of Insect Structure Laboratory*
 - **Spring 2011, ENTO 301/602:** *Biodiversity and Biology of Insects Laboratory*

- **Summer 2010:** Undergraduate Teaching Assistant, Texas A&M University, College of Agriculture and Life Sciences, Department of Entomology, College Station, Texas; *ENTO 322: Insects in Human Society*
- **Fall 2009:** Undergraduate Student Assistant, Texas A&M University, College of Agriculture and Life Sciences, Department of Entomology, College Station, Texas; *FIVS 205: Introduction to Forensic Science*
- **Summer 2008-Fall 2010:** Student Worker; Texas A&M University, College of Agriculture and Life Sciences, Department of Entomology, College Station, Texas
 - **Spring-Fall 2010,** Parasitoid Wasp Collection Curator
 - **Fall 2009-Spring 2010,** Forensic Entomology Collection Curator
 - **Summer-Fall 2008,** Entomology Research Lab Coleoptera Curator
- **Spring 2007-Spring 2008:** Student Worker/Biology Laboratory Assistant, Kilgore College, Department of Biology, Kilgore, Texas

HONORS AND AWARDS

- **Summer 2012,** Student Enhancement and Endowment Scholarship, Department of Entomology, Texas A&M University
- **Spring 2012,** Donald E. Johnston fellowship, The Ohio State University Acarology Summer Program
- **Spring 2012,** Roth Fund Scholarship, American Arachnological Society
- **Spring 2012,** Graduate Teaching Assistant of the Year in Forensic and Investigative Sciences, Department of Entomology, Texas A&M University
- **Summer 2011,** Student Enhancement and Endowment Scholarship, Department of Entomology, Texas A&M University
- **Spring 2011,** Graduate Teaching Assistant of the Year in Entomology, Department of Entomology, Texas A&M University
- **Spring 2011,** George Bush Travel Grant, Department of Entomology, Texas A&M University
- **Fall 2010,** Manning-Price Scholarship, Department of Entomology, Texas A&M University
- **Fall 2010,** Entomology Scholars Society Scholarship, Department of Entomology, Texas A&M University
- **Fall 2010,** College of Agriculture and Life Sciences Scholarship, College of Agriculture and Life Sciences, Texas A&M University
- **Fall 2009-Spring 2010,** Entomology Advising Scholarship, Department of Entomology, Texas A&M University
- **Fall 2009-Spring 2010,** Manion Scholarship, Department of Entomology, Texas A&M University
- **Spring 2009,** Gilman Entomology Scholarship, Department of Entomology, Texas A&M University
- **Spring 2009,** International Education Fee Scholarship for Study Abroad, Texas A&M University
- **Fall 2009,** Distinguished Student Award, College of Agriculture and Life Sciences, Texas A&M University
- **Spring 2006-Spring 2008,** Presidential Scholarship, Kilgore College

STUDENT ORGANIZATIONS

- **2011-2012,** Texas A&M University Department of Entomology Graduate Linnaean Game Team
- **2011,** Texas A&M University Evolution, Ecology, Biology (EEB) Group, Member
- **2011,** Texas A&M University Entomology Graduate Student Organization (EGSO), Member
- **2010,** Texas A&M University Department of Entomology Undergraduate Linnaean Game Team

- **2010**, Texas A&M University Entomology Scholars Society, Member
- **2008-2010**, Texas A&M University Aggie Forensic Investigative Science Organization (AFIS), Historian
- **2008-2010**, Texas A&M University Undergraduate Entomology Students Organization (UESO), Member
- **2008-2010**, Texas A&M University Anthropology Society, Member

PROFESSIONAL ORGANIZATIONS

- **2009-2014**, North American Forensic Entomology Association (NAFEA), Student Affiliate
- **2010-2014**, Entomological Society of America (ESA), Medical, Urban, and Veterinary Entomology (MUVE) Section, Student Member
- **2010-2013**, American Academy of Forensic Sciences (AAFS), General Section, Student Affiliate
- **2012**, American Arachnological Society (AAS), Student Member

INTERNATIONAL TRAVEL

- **June-July 2011**: Kuala Lumpur, Malaysia. I visited Universiti Teknologi Mara in Kuala Lumpur to give an invited talk on the utility of mites in decomposition ecology and forensic investigations to aspiring forensic entomologists and medical professionals.
- **June-July 2009**: Dominica, West Indies. I participated in a study abroad program affiliated with Texas A&M University in the Caribbean island of Dominica. Here I was able to perform both individual research on blow flies as well as group research on aquatic insects in fresh water streams throughout the island. All participants and instructors were entomologists and ecologists.

ONGOING RESEARCH

- **Owings, C.G.**, Picard, C.J. 2014. Characterization of forensically important mite and beetle species from carrion in Indiana. Indiana University-Purdue University Indianapolis, Indianapolis, IN.
- Andere, A.A., **Owings, C.G.** Parrott, J., Ramos, E., Tarone, A.M. Whale, J., *Picard, C.J. 2014. Genomic sequencing of artificially selected development phenotypes in *Cochliomyia macellaria*: Tools for improved PMI_{MIN} estimates. Indiana University-Purdue University Indianapolis, Indianapolis, IN.

UNPUBLISHED RESEARCH

- **Owings, C.G.**, Wharton, R.A. 2010. Description of puparia of *Glyphidops flavifrons* Bigot (Diptera: Neriidae).
- **Owings, C.G.**, Larison, N., Bytheway, J.A. 2010. Taphonomic changes observed on skeletal remains in Southeast Texas. Southeast Texas Applied Forensic Science Facility (STAFSF), Sam Houston State University, Huntsville, TX.
- **Owings, C.G.**, Larison, N., Bytheway, J.A. 2010. Fungi associated with skeletal remains in Southeast Texas. Southeast Texas Applied Forensic Science Facility (STAFSF), Sam Houston State University, Huntsville, TX.
- **Owings, C.G.**, Tomberlin, J.K. 2010. A Survey of calliphorid attraction to microbe-laden and antibiotic treated beef liver in College Station, Texas. Texas A&M University, College Station, TX.
- **Owings, C.G.**, Tomberlin, J.K. 2009. A comparative survey of calliphorid attraction to microbe-laden and antibiotic treated beef liver in Dominica, West Indies. Dominica, West Indies.

INTERNSHIPS AND PROFESSIONAL WORKSHOPS ATTENDED

- **June-July 2012**, “Soil Mites” Workshop, Acarology Summer Program. This was a 3-week intensive course regarding morphology, physiology, ecology, and identification of soil mite fauna. The Ohio State University, Columbus, OH.
- **June-August 2010**, Internship at Southeast Texas Applied Forensic Science (STAFS) Facility. During this time, I performed forensic anthropology and taphonomy research. Sam Houston State University, Huntsville, TX.
- **February 2010**, “Gunshot Wounds”. This was an 8-hour workshop that focused on the various forms of trauma inflicted by firearms. American Academy of Forensic Sciences (AAFS) annual meeting, Seattle, WA.

EXHIBITOR EXPERIENCE AT PROFESSIONAL MEETINGS

- **January 2013**, University of Florida Veterinary Forensic Science Program Exhibitor Booth at the North American Veterinary Community (NAVC) conference in Orlando, FL. This booth was designed to promote the online Veterinary Forensic Sciences certificate program in Veterinary Forensic Medicine and Shelter Medicine. My role in this event was to provide information to interested individuals on forensic sciences in general, and more specifically, information regarding forensic entomology.

ORAL PRESENTATIONS AT PROFESSIONAL MEETINGS (* denotes speaker)

- ***Owings, C.G.** 2014. Exciting advances in forensic entomology: a review of recent literature. North American Forensic Entomology Association annual meeting, July 2014, St. Petersburg, FL.
- Andere, A.A., Owings, C.G. Parrott, J., Ramos, E., Tarone, A.M. Whale, J., *Picard, C.J. 2014. Genomic sequencing of artificially selected development phenotypes in *Cochliomyia macellaria*: Tools for improved PMI_{MIN} estimates. North American Forensic Entomology Association annual meeting, July 2014, St. Petersburg, FL.
- ***Owings, C.G.**, Pimsler, M.L. 2013. Applications of acarology to decomposition ecology and legal investigations. Entomological Society of America annual meeting, November 2013, Austin, TX.
- ***Pimsler, M.L., Owings, C.G.** 2013. A brief history of forensic entomology: where have we been and where are we headed? Entomological Society of America annual meeting, November 2013, Austin, TX.
- ***Owings, C.G.**, Tarone, A.M., Spiegelman, C., Tomberlin, J.K. 2013. Phenotypic plasticity of *Cochliomyia macellaria* Fabricius (Diptera: Calliphoridae) in Texas: how intraspecific variation can impact forensic entomology. American Academy of Forensic Sciences annual meeting, February 2013, Washington, D.C.
- ***Owings, C.G.**, Tarone, A.M., Spiegelman, C., Tomberlin, J.K. 2012. Developmental plasticity of the secondary screwworm, *Cochliomyia macellaria* Fabricius (Diptera: Calliphoridae), in Texas. Entomological Society of America annual meeting. November 2012, Knoxville, TN.
- ***Owings, C.G.**, Tarone, A.M., Spiegelman, C., Tomberlin, J.K. 2012. Phenotypic plasticity of *Cochliomyia macellaria* (Fabricius) in Texas, U.S.A. North American Forensic Entomology Association annual meeting. July 2012, Las Vegas, NV.
- ***Owings, C.G.**, Wharton, R.A. 2011. Description of puparia of *Glyphidops flavifrons* Bigot (Diptera: Neriidae). Entomological Society of America annual meeting. November 2011, Reno, NV.
- ***Owings, C.G.** 2011. The Acari: model organisms for studies in biodiversity and ecological interactions. Southwestern Branch Entomological Society of America annual meeting. March 2011, Amarillo, TX.

POSTER PRESENTATIONS AT PROFESSIONAL MEETINGS

- Pimsler, M.L., **Owings, C.G.**, O'Connor, B.M., Tomberlin, J.K., Tarone, A.M. 2013. New mite species described in human death investigation: implications for forensic entomology and decomposition ecology. Second Annual International Forensic Research Institute (IFRI) Forensic Science Symposium. March 2013, Miami, FL.
- Pimsler, M.L., **Owings, C.G.**, O'Connor, B.M., Tomberlin, J.K., Tarone, A.M. 2012. New mite species described in human death investigation: implications for forensic entomology and decomposition ecology. Entomological Society of America annual meeting. November 2012, Knoxville, TN.
- **Owings, C.G.**, Larison, N., Bytheway, J.A. 2011. Taphonomic changes observed on skeletal remains in Southeast Texas. American Academy of Forensic Sciences annual meeting. February 2011, Chicago, IL.

INVITED TALKS AND PROFESSIONAL WORKSHOPS

- **Owings, C.G.**, Pimsler, M.L. 2012. Forensic Entomology Workshop. I presented a forensic entomology lecture and demonstrated collection techniques to San Antonio Police Department Crime Scene Investigators. July 2012, San Antonio, TX.
- Tomberlin, J.K., Flores, M., **Owings, C.G.**, Pimsler, M.L., Singh, B. 2012. FBI Human Remains Recovery Training. I demonstrated forensic entomology collecting and preservation techniques to FBI agents, Texas Rangers, and local law enforcement. April 2012, Conroe, TX.
- **Owings, C.G.**, Pimsler, M.L. 2011. Mites and forensics: linking acarology to decomposition ecology. I presented a lecture on the importance of mites in decomposition ecology to forensic anthropologists and anthropology graduate students. Texas State University. November 2011, San Marcos, TX.
- **Owings, C.G.**, Pimsler, M.L. 2011. Acarology and decomposition ecology. I presented a lecture on collection procedures for mites and other microarthropods to Crime Scene Investigators from Bexar County Crime Scene Investigation Laboratory. October 2011, San Antonio, TX.
- **Owings, C.G.**, Pimsler, M.L., Teel, P., Tomberlin, J.K. 2011. Forensic Acarology Workshop. A fellow graduate student and myself developed, organized, and taught a workshop on recognizing and collecting mites at crime scenes and their potential significance in death investigations. North American Forensic Entomology Association annual meeting. July 2011, College Station, TX.
- **Owings, C.G.** 2011. Mites and forensics: linking acarology to decomposition ecology, "Forensic Entomology & Its Implications in Medicine" seminar. I was invited to speak about the importance of mites in death investigations and decomposition ecology. July 2011, Universiti Teknologi Mara, Kuala Lumpur, Malaysia

SYMPOSIA ORGANIZED

- **Owings, C.G.**, Pimsler, M.L. 2014. Youthful Perspectives in Forensic Entomology, Part Deux: The Road Less Traveled. Entomological Society of America annual meeting (*Will be held in Portland, OR, in November 2014*)
- **Owings, C.G.**, Pimsler, M.L. 2013. Youthful Perspectives in Forensic Entomology: Who are These Young Punks? Entomological Society of America annual meeting, November 2013, Austin, TX.

PUBLICATIONS

- Pimsler, M.L., **Owings, C.G.**, O'Connor, B.M., Tarone, A.M., Tomberlin, J.K., **2014**. Association of *Myianoetus muscarum* (Acari: Histiostomatidae) with *Synthesiomyia nudiseta* (Wulp) (Diptera: Muscidae) on Human Remains. Journal of Medical Entomology. (*In review*)
- O'Connor, B.M., Pimsler, M.L., **Owings, C.G.**, Tomberlin, J.K. **2014**. Redescription of *Myianoetus muscarum* (Acari: Histiostomatidae) associated with human remains in

Texas, USA, with designation of a neotype from Western Europe. *Journal of Medical Entomology* (*In review*)

- **Owings, C.G.**, Spiegleman, C., Tarone, A.M., Tomberlin, J.K., **2014**. Developmental variation among *Cochliomyia macellaria* Fabricius (Diptera: Calliphoridae) populations from three ecoregions in Texas, USA. *International Journal of Legal Medicine* 128 (4): 709-717
- Aitkenhead-Peterson, J.A., **Owings, C.G.**, Alexander, M.B., Larison, N., Bytheway, J.A, **2011**. Mapping the lateral extent of human cadaver decomposition with soil chemistry. *Forensic Science International* 216 (1-3): 127-134.

REFERENCES

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