

SIBYL RAE BUCHELI

ASSOCIATE PROFESSOR

Sam Houston State University
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Huntsville, TX 77340
936.294.1550; bucheli@shsu.edu

Major Research Interests

The Biology of Human Decomposition in Southeastern, Subtropical Texas
Microbial Succession on Cadavers in Southeastern, Subtropical Texas
Insect Succession on Carrion and Cadavers in Southeastern, Subtropical Texas
Molecular and Morphological Evolution of Lepidoptera, Coleoptera, and Diptera
Use of Ecological and Behavioral Data in Phylogenetic Studies
Evolution of Insect Genitalia and their Utility as Phylogenetic Characters

Academic Employment

2014-Present Associate Professor, Sam Houston State University.
2008-2014 Assistant Professor, Sam Houston State University.
2007-2008 Visiting Assistant Professor, Sam Houston State University.
2005-2007 Post-doctoral Researcher, The Ohio State University, Dr. John Wenzel. Evolution of the Lepidopteran superfamily Gelechioidea.

Education

2005 The Ohio State University, Department of Entomology, Doctor of Philosophy.
1999 The Ohio State University, Department of Entomology, Master of Science.
1996 Hiram College, Department of Biology, Bachelor of Arts.

Publications

BELK A., XU Z.Z., CARTER D.O., LYNNE A.M., **BUCHELI S.R.**, KNIGHT R. AND METCALF J.L. 2018. Microbiome Data Accurately Predicts the Postmortem Interval Using Random Forest Regression Models. *Genes* 9(2):104

HYDE EMBRIETTE R, METCALF J.L., **BUCHELI, S.R.**, LYNNE A.M., AND KNIGHT, R. 2017. Microbial Communities to Associated with Decomposing Corpses. In: *Forensic Microbiology*. John Wiley & Sons Ltd.

BUCHELI, S.R. AND LYNNE, A.M. 2016. The Microbiome of Human Decomposition: Studying microbial communities involved at every stage of cadaver decomposition is leading to a more precise understanding of the overall process. *Microbe* 11(4):165-171

METCALF, J.L., XU, Z.Z., WEISS, S., LAX, S., VAN TREUREN, W., HYDE, E.R., SONG, S.J., AMIR, A., LARESEN, P.,

- SANGWAN, N., HAARMANN, D.P., HUMPHREY, G.C., ACKERMAN, G., THOMPSON, L.R., LAUBER, C., BIBAT, A., NICHOLAS, C., GEBERT, M.J., PETROSINO, J.F., REED, S.C., GILBERT, J.A., LYNNE A.M., **BUCHELI, S.R.**, CARTER, D.O, AND KNIGHT, R. 2015. A Universal Clock for Estimating the Postmortem Interval. *Science*. DOI 10.1126/science.aad2646
- LINDGREN, N.K., M.S. SISSON, A.D. ARCHAMBEAULT, B.C. RAHLWES, J.R. WILLETT, AND **S.R. BUCHELI**. 2015. Four Forensic Entomology Case Studies: Records and Behavioral Observations on Seldom Reported Cadaver Fauna With Notes on Relevant Previous Occurrences and Ecology. *Journal of Medical Entomology*. DOI: <http://dx.doi.org/10.1093/jme/tju023>
- HYDE, E.R., D.P. HAARMANN, J.F. PETROSINO, A.M. LYNNE, AND **S.R. BUCHELI**. 2015. Initial insights into bacterial succession during human decomposition. *International Journal of Legal Medicine*. DOI 10.1007/s00414-014-1128-4.
- ZHANG, X. C.L. GLENNIE, **S.R. BUCHELI**, N.K. LINDGREN, AND A.M. LYNNE. 2014. Terrestrial Laser Scanning and a Degenerated Cylinder Model to Determine Gross Morphological Change of Cadavers under Conditions of Natural Decomposition. *Journal of Forensic Science*. 241:35-45.
- BUCHELI, S.R.**, Z. PAN, C.L. GLENNIE, A.M. LYNNE, D.P. HAARMANN, AND J.M. HILL. 2014. Terrestrial laser scanning to model sunlight irradiance on cadavers under conditions of natural decomposition. *International Journal of Legal Medicine*. 128(4):725-32.
- HYDE, E.R., D.P. HAARMANN, A.M. LYNNE, **S.R. BUCHELI**, AND J.F. PETROSNO. 2013. The Living Dead: Bacterial Community Structure of a Cadaver at the Onset and End of the Bloat Stage of Decomposition. *PLoS ONE* 8(10).
- LEWIS, M.L., **S.R. BUCHELI**, AND A.M. LYNNE, 2012. Use of Microthemes to Increase Writing Content for Introductory Science Laboratory. *Journal of Microbiology and Biology Education* 13:1.
- RAGHAVENDRA R., C.P. RANDLE , AND **S.R. BUCHELI** 2011. Identification of a deathscene maggot using standardized molecular methods: *Sarcophaga bullata* Parker 1916 (Sarcophagidae) Out-numbers Blowflies (Calliphoridae) on an Urban Cadaver in Southeastern Texas. *Journal Forensic Research* 2:135.
- VAN NIEUKERKEN, E.J., KAILA, L., KITCHING, I.J., KRISTENSEN, N.P., LEES, D.C., MINET, J., MITTER, C., MUTANEN, M., REGIER, J.C., SIMONSEN, T.J., WAHLBERG, N., YEN, S.-H., ZAHIRI, R., ADAMSKI, D., BAIXERAS, J., BARTSCH, D., BENGTTSSON, B.Å., BROWN, J.W. , **BUCHELI, S.R.**, DAVIS, D.R., DE PRINS, J., DE PRINS, W., EPSTEIN, M.E., GENTILI-POOLE, P., GIELIS, C., HÄTTENSCHWILER, P., HAUSMANN, A., HOLLOWAY, J.D., KALLIES, A., KARSHOLT, O., KAWAHARA, A. KOSTER, S.(J.C.), KOZLOV, M., LAFONTAINE, J.D., LAMAS, G., LANDRY, J.-F., LEE, S., NUSS, M., PENZ, C., ROTA, J., SCHMIDT, B.C., SCHINTLMEISTER, A., SOHN, J.C., SOLIS, M.A., TARMANN, G.M., WARREN, A.D., WELLER, S., YAKOVLEV, R., ZOLOTUHIN, V., AND ZWICK, A. 2011. Order Lepidoptera Linnaeus, 1758. In: Zhang, Z.-Q. (Ed.), *Animal Biodiversity: an Outline of Higher-Level Classification and Survey of Taxonomic Richness*. *Zootaxa* 3148: 212–221.
- BUCHELI, S.R.**, S.C. PASSOA AND J.W. WENZEL. 2010. A Phylogenetic Test of Ehrlich and Raven's Theory of

Escape and Radiation in Insects that Feed on Toxic Plants, Based on Nearctic Depressaria Moths (Gelechioidea: Elachistidae: Depressariinae), with Discussion of the Evolution of Genitalia. *Entomologica Americana* 116(3&4):1–24.

LINDGREN, N.K., **S.R. BUCHELI**, A.D. ARCHAMBEAULT, AND J.A. BYTHEWAY. Exclusion of forensically important flies due to burying behavior by the red imported fire ant (*Solenopsis invicta*) in southeast Texas. *Journal of Forensic Science International* 204(1-3):e1-e3.

BUCHELI, S.R., J. FLORENCE, D. GANGITANO AND J.A. BYTHEWAY. 2010. Necrophagous caterpillars provide human mtDNA evidence. *Journal of Forensic Science* 55(4):1130-1132.

SONG, H. AND **S.R. BUCHELI**. 2010. The utility of insect genitalia in morphological analyses. *Cladistics* 26(1), 23-35. Published Online: Aug 25 2009 5:18AM.

BUCHELI, S.R. 2009. Annotated review and discussion of phylogenetically important characters for families and subfamilies of Gelechioidea (Insecta: Lepidoptera). *Zootaxa* 26(1), 23 – 35.

BUCHELI, S.R., J.A. BYTHEWAY, S.M. PUSTILNIK, AND J. FLORENCE. 2009. Insect successional pattern of a corpse in cooler months of subtropical southeastern Texas: A case report. *Journal of Forensic Sciences* 54 (2), 452 – 455.

BUCHELI, S.R., D. HORN, AND J.W. WENZEL. 2006. Biodiversity of Gelechioidea (microlepidoptera): An assessment of a re-established Appalachian forest in southern Ohio, *Biodiversity and Conservation* 15 (1), 503 – 516. *Themed Issue: Looking after the Woof and Weft of Life: Arthropod Diversity and its Conservation*.

BUCHELI, S.R. AND J.W. WENZEL. 2005. Gelechioidea (Insecta: Lepidoptera) systematics: A reexamination analysis using combined morphology and mitochondrial DNA data. *Molecular Phylogenetics and Evolution* 35, 380-394.

BUCHELI, S.R., J.-F. LANDRY, AND J.W. WENZEL. 2002. Cladistic Analysis of Larval Case Architecture and Implications of Host-Plant Associations for North American *Coleophora* (LEPIDOPTERA: COLEOPHORIDAE). *Cladistics* 18, 71-93.

Grants

2018 **CoPI.** SHSU Faculty Research Grant, “Human Decomposition: Effects of Indoor versus Outdoor Decomposition on the Microbiome of Human Cadavers and Implications for Future Forensic Research,” prepared jointly with Aaron Lynne, Ph.D. \$5,000

2015 **Co-Author.** National Institute of Justice # 2015-DN-BX-K016 “Microbial clocks for estimating the postmortem interval of human remains at three anthropological research facilities,” prepared with PI Jessica L. Metcal, Ph.D, Co-PIs Rob Knight, Ph.D., David O. Carter, Ph.D., Franklin Damann, Ph.D., co-author Aaron M. Lynne. Ph.D. \$863,485

2015 **CoPI.** “How Insects and Bacteria Can Solve Murder Mysteries,” prepared jointly with Aaron Lynne, Ph.D. \$4,000.00

- 2014** **CoPI.** SHSU Enhancement Research Grant, “Fine-scale spatial and temporal sampling of the microbiome of a cadaver,” prepared jointly with Aaron Lynne, Ph.D. \$15,000
- 2013** **CoPI.** SHSU Enhancement Research Grant, “Human Decomposition Volatile Measurement For Microbiological Correlation,” prepared jointly with Donovan Haines, Ph.D. \$15,000
- 2012** **CoPI.** National Institute of Justice # 2012-DN-BX-K023 “Human decomposition: A mosaic model for community succession and implications for future forensic research,” prepared jointly with Aaron Lynne, Ph.D. and coauthored by Joseph Petrosino, Ph.D. and Mathew Ward, Ph.D. \$304,961.00
- 2012** **CoPI.** National Science Foundation # 1154018 Grant “PEERS Exploring Biology, Mathematics and Statistics,” prepared jointly with Melinda Holt, Ph.D. and Brian Loft, Ph.D. \$599,249.
- 2012** **CoAuthor.** NIJ/FSF Student Research Grant-2011- 2012, “A molecular approach: Species composition of the maggot mass in human cadavers in the pineywoods ecoregion of southeastern Texas,” Ashleigh Faris BS, Sibyl Bucheli, PhD, and David Gangitano, PhD.; \$7000
- 2011** **CoPI.** SHSU Enhancement Research Grant, “Microbial Metagenomic Analysis of Human Decomposition,” \$15,000
- 2010** **PI.** SHSU Enhancement Research Grant, “Investigation of Calliphoridae across the 10 ecoregions of Texas,” \$12,558
- 2009** **PI.** SHSU Faculty Research Grant, “Systematics and Diversity of Gelechioidea (Lepidoptera),” \$5,000
- 2008** **CoPI.** Beckman-Coulter Inc. Genomics Educational Grant, prepared jointly with Dr. Christopher Randle, Dr. Raelynn Deaton, Dr. Anne Gaillard, and Dr. Todd Primm; \$100,000
- 2004** **Author.** National Science Foundation #0415061 Grant “Collaborative Research: A Global Framework for the Phylogeny of Gelechioid Moths, a Megadiverse Radiation of Herbivores,” prepared with John W. Wenzel, Ph.D. and Richard Brown, Ph.D. \$150,000
- 2004** **Author.** Alumni Grants for Graduate Research and Scholarship, The Ohio State University
- 2001** **Author.** DeWind Award for Lepidoptera Research and Conservation, Xerces Society, \$2,000
- 2000** **Author.** Theodore Roosevelt Memorial Fund, American Museum of Natural History, \$2,000

Presentations

Invited Presentations and Workshops:

- 2017** The Annual Meeting of the Entomological Society of America, Denver, Colorado, 5 – 8 November
- 2016** Entomology Leadership Summit Perspective Talk, Entomological Society of America 27 – 28 September
- 2016** Lecture, University of Michigan Field Station
- 2016** Seminar, University of Michigan Field Station
- 2016** Seminar, University of San Diego

2016 Lecture, Forensic Science Educational Conference, Sam Houston State University
2015 Seminar, Montgomery County Lawyers Association
2015 Seminar, Museum of Natural History, Bulawayo, Zimbabwe
2014 Lecture, Forensic Science Educational Conference, Sam Houston State University
2014 Symposium, American Association of Forensic Scientists Annual Meeting, February 17 – 22
2014 Lecture, Audubon’s Society, Huntsville, Texas Chapter
2013 Seminar, University of Colorado Boulder
2013 Lecture, United Unitarians, Huntsville, Texas
2012 Forensic Science Educational Conference, Sam Houston State University
2012 Writing in Biology. College of Humanities and Social Sciences Annual Teaching Conference, Sam Houston State University
2011 Southwestern Association of Forensic Scientists 2011 Conference, Houston Texas.
2011 Forensic Science Educational Conference, Sam Houston State University in conjunction with The American Academy of Forensic Science and STAFS
2010 Forensic Science Educational Conference, Sam Houston State University in conjunction with The American Academy of Forensic Science and STAFS
2009 Forensic Science Educational Conference, Sam Houston State University in conjunction with The American Academy of Forensic Science and STAFS
2007 The Field Museum, Chicago, Illinois
2006 University of California, Riverside, California
2006 Sam Houston State University, Huntsville, Texas
2006 Entomological Society of America, Indianapolis, Indiana
2005 Entomological Society of America, Ft. Lauderdale, Florida

Submitted Oral Presentations:

2016 XXV International Congress of Entomology, Orlando, Florida, 25 – 30 September (3 titles)
2014 American Society of Microbiologists Texas Branch, Houston, Texas, 6 – 8 October (2 titles)
2014 The Annual Meeting of the Entomological Society of America, Portland, Oregon, 16 – 19 November (1 title)
2013 The Annual Meeting of the Entomological Society of America, Austin, Texas, 13 – 16 November (1 title)
2012 The Annual Meeting of the Entomological Society of America, Knoxville, Tennessee, 11 – 14 November (4 titles)
2011 Sam Houston State University Biological Sciences Research Symposium, Huntsville Texas, Spring Semester
2011 Annual North American Forensic Entomology Meeting, College Station, Texas, 20-23 July (2 titles)
2011 The Annual Meeting of the Entomological Society of America, Reno, Nevada, 13 – 16 November (2 titles)
2010 Entomological Society of America Annual Meeting, San Diego CA, 12-15 December.
2010 North American Forensic Entomology Annual Meeting, Windsor, Ontario 7-9 July
2009 National Entomological Society of America Annual Meeting, Indianapolis, Indiana (3 titles)
2009 North American Association of Forensic Entomologists, Miami, Florida
2008 National Entomological Society of America Annual Meeting, Reno, NV

2008 The Lepidopterists Society Annual Meeting, Starkville, Mississippi
2007 The Willi Hennig Society Meetings, XXV, New Orleans, Louisiana
2006 The Lepidopterists Society Annual Meeting, Gainesville, Florida
2006 The Willi Hennig International Meetings, XXIV, Oaxaca, Mexico
2005 Presented in partial fulfillment of the Doctor of Philosophy at The Ohio State University
2005 *Symposium presentation*, National Entomological Society of America Annual Meeting, Fort Lauderdale, Florida
2004 *Harry Clench Award*, The Lepidopterists' Society Annual Meeting, College Park, Maryland
2004 National Entomological Society of America Annual Meeting, Salt Lake City, Utah
2003 National Entomological Society of America Annual Meeting, Cincinnati, Ohio
2002 The Lepidopterists Society Annual Meeting, Charleston North Carolina
2000 Evolution Annual Meeting, Bloomington, Indiana
2000 National Entomological Society of America Annual Meeting, Montreal, Quebec
1999 Presented in partial fulfillment of the Degree of Masters of Science at The Ohio State University

Submitted Poster Presentations:

2017 The Annual Meeting of the Entomological Society of America, Denver, Colorado, 5 – 8 November (1 title)
2017 American Society of Microbiologists, New Orleans, Louisiana, 1 – 5 May (2 titles).
2014 American Society of Microbiologists Texas Branch, Houston, Texas, 6 – 8 October (4 titles)
2014 The Annual Meeting of the Entomological Society of America, Portland, Oregon, 16 – 19 November (5 titles)
2013 The Annual Meeting of the Entomological Society of America, Austin, Texas, 13 – 16 November (5 titles)
2013 American Society of Microbiologists Texas Branch, New Orleans, Louisiana, 29 – 31 October (1 title)
2013 American Society of Microbiologists, Denver, Colorado, 10 – 15 May (1 title).
2012 The Annual Meeting of the Entomological Society of America, Knoxville, Tennessee, 11 – 14 November (4 titles)
2012 American Academy of Forensic Sciences Annual Meeting Student Presentations— Atlanta GA, February 2012
2011 Texas Academy of Sciences Annual Meeting, St. Edward's University in Austin, Texas, 3 - 5 March
2011 Sam Houston State University Biological Sciences Research Symposium, Huntsville Texas, Spring Semester (2 titles)
2011 Annual North American Forensic Entomology Meeting, College Station, Texas, 20-23 July (5 titles)
2011 The Annual Meeting of the Entomological Society of America Annual Meeting, Reno, Nevada, 13 – 16 November (7 titles)
2010 Entomological Society of America Annual Meeting, San Diego, CA 12-15 December
2010 North American Forensic Entomology Annual Meeting, Windsor, Ontario 7-9 July
2010 Microbial Genomics and Metagenomics Workshop. Walnut Creek, CA. October

- 2009 National Entomological Society of America Annual Meeting, Indianapolis, Indiana (2 titles)
- 2009 North American Association of Forensic Entomologists, Miami, Florida (3 titles)
- 2008 National Entomological Society of America Annual Meeting, Reno, NV (2 titles)
- 2008 The Lepidopterists Society Annual Meeting, Starkville, Mississippi
- 2005 The Lepidopterists Society Annual Meeting, Sierra Vista, Arizona
- 2004 The Lepidopterists Society Annual Meeting, College Park, Maryland
- 2002 The Willi Hennig International Meetings, XXI, Helsinki, Finland
- 2001 National Entomological Society of America Annual Meeting, San Diego, California
- 1998 National Entomological Society of America Annual Meeting, Las Vegas, Nevada
- 1999 *President's Prize Award Winner*, National Entomological Society of America Annual Meeting, Atlanta Georgia
- 1996 The Ohio Academy of Sciences, Undergraduate Thesis

Awards and Recognition

- 2011 Sam Houston State University Mentoring Award
- 2004 Knull Fund, Ohio State University, Department of Entomology, Insect Collection
- 2004 Dean's Award for Excellence as Graduate Teaching Assistant, The Ohio State University
- 2004 Edward J. Ray Travel Award for Scholarship and Service, The Ohio State University
- 2004 Graduate Teaching Associate Graduate Assistant Teaching Award, The Ohio State University
- 2004 Harry Clench Award for Best Student Talk. Lepidopterists Society of America, College Park, Maryland
- 2003 DeLong Research Award, Ohio State University, Department of Entomology
- 2002 Fred W. Hink Research Award, Ohio State University, Department of Entomology
- 2002 Professional Development Fund, Ohio State University, Graduate Committee
- 2002 Clive Edwards Travel Fund, Ohio State University, Department of Entomology
- 2002 Knull Fund, Ohio State University, Department of Entomology, Insect Collection
- 1999 Introductory Biology Program Student Teaching Award, The Ohio State University
- 1999 President's Prize for Best Student Poster, First Place; Entomological Society of America, Atlanta, Georgia

Symposia Organized

- 2015 "Life After Death", American Society for Microbiologists
- 2005 "Issues of Homology", First Annual Student Symposium, The Lepidopterist's Society of America, with Jennifer Zaspel
- 2005 "The Phallic Cult", Program Symposium and Section Symposium, National Entomological Society of America, with Hojun Song

Teaching Experience

- Lecturer** 2007 – Present. Sam Houston State University. Contemporary Biology BIO134; Economic Entomology BIO364; Forensic Entomology BIO530, General Entomology BIO431; Invertebrate Zoology BIO471; Introduction to Evolutionary Biology BIO461; Insect Evolution BIO571; Scientific Illustration BIO595
- Graduate Teaching Assistant** 1999 – 2004. The Ohio State University. General Biology for Nonmajors BIO101; Nonmajors Plant Biology BIO101; Nonmajors Entomology ENT101; Human Biology BIO102, Head Graduate Teaching Associate; General Biology for Majors BIO114, Head Graduate Teaching Associate; Evolution BIO440; Entomology for Science Teachers ENT520; Advanced Economic Entomology ENT620; Insect Systematics ENT621; Insect Morphology ENT632; Insect Ecology ENT641; Medical Entomology ENT680
- Seminars Designed** 1999 – 2005. The Ohio State University. Trends in Insect Evolution ENT795 (2004); Model-based Phylogenetics ENT795 (2006); Modern Techniques of Entomological Illustration (part of Insect Morphology ENT632)

Student Advising

Graduate Research

Major Advisor, in progress

Kylee Kliener, Major Advisor, Sam Houston State University
Bethany Walker, Major Advisor, Sam Houston State University
Jaqueline Vazquez, Major Advisor, Sam Houston State University
James Willet, Major Advisor, Sam Houston State University
Amanda Walton, Sam Houston State University

Major Advisor, graduated

Dorothy Madamba, Major Advisor, Sam Houston State University
Natalie Lindgren, Major Advisor, Sam Houston State University
Alan Archambeault, Major Advisor, Sam Houston State University
Brent Rahlwes, Major Advisor, Sam Houston State University
Michelle Lewis, Major Advisor, Sam Houston State University
Melissa Sisson, Major Advisor, Sam Houston State University
Janalynn West, Graduate Committee Member/Major Advisor, Sam Houston State University
Lauren Smith, Major co-Advisor, Sam Houston State University
Raymond Berry, Major co-Advisor, Sam Houston State University
Keli King, Major co-Advisor, Sam Houston State University

Committee Member, In Progress

Melissa Sisson, External Committee Member, University of North Dakota
Faith Byrd, Committee Member, Sam Houston State University
Zack Carroll, Committee Member, Sam Houston State University
Nicholas Hlovacs, Committee Member, Sam Houston State University
Elizabeth Johnson, Committee Member, Sam Houston State University
Peter Quach, Committee Member, Sam Houston State University
Michelle Woodson, Committee Member, Sam Houston State University

Committee Member, graduated

Clayton Sublett, Committee Member, Sam Houston State University
Ashley Morgan, Committee Member, Sam Houston State University
Katey Estill, Committee Member, Sam Houston State University
Mallory Mardock, Committee Member, Sam Houston State University
Amber Bartelt, Committee Member, Sam Houston State University
Jessica Sanchez, Committee Member, Sam Houston State University
Stephanie Staicer, Committee Member, Sam Houston State University
Christopher Wilson, Committee Member, Sam Houston State University

Undergraduate Research

Alicia Weichert, BIOL 4095 (Spring 2018) Human Decomposition.
Alexis Carney, BIOL 4095 (Spring 2018) Human Decomposition.
Nyssa Tarver, BIOL 4095 (Spring 2018) Human Decomposition.
Asslison Silva, BIOL 4095 (Spring 2018) Human Decomposition.
Derek Dane, BIOL 4095 (Spring 2018) *Wolbachia* and Pupation.
Raymond Berry, BIOL 4095 (Spring 2014) The microbiome of cadaver flies.
Raymond Berry, BIOL 4095 (Fall 2013) The use of florescent dyes to track maggot movement.
Kylee Kliener, BIOL 4095 (Fall 2013) Insect macrophotography and development of a laboratory manual for General Entomology.
Kaylin Henson, BIOL 4095 (Fall 2013) The microbiome of cadaver flies.
Chelsea Hernandez, BIO495 (Spring 2012) Ability of phorid flies to access tight-sealing containers
James Willet, BIO495 (Fall 2011 – Spring 2012) Identification of a phorid fly on human remains
Araceli Rosillo, McNair Scholar, BIO495 (Spring 2012) Biodiversity of Carrion Beetles in Southeast Texas
Beth Ferguson, Honors Scholar, BIO495 (Spring 2012) Effects of Neen Oil on White Flies
Melissa Sisson, BIO495 (Fall 2009), Biodiversity of Carrion Beetles
Eric Mikolajchak, BIO495 (Summer 2009), Inset Biodiversity of a Mitigated pond in East Texas
Orry Martin, BIO495 (Spring 2009), Sam Houston State University. An investigation of the free-living lifestyle of Planaria with special attention paid to personal observations
Alan Archambeault, BIO495 (Fall 2008), Sam Houston State University. Molecular characterization of filth flies in Texas
Savannah Witt, BIO495 (Fall 2008), Sam Houston State University. A survey of current techniques used in insects collection

Natalie Lindgren, Independent Research (2008), Sam Houston State University. "The Thicket of Life" All Taxon Bioinventory (ATBI)

Alan Archambeault, Independent Research (2008), Sam Houston State University. "The Thicket of Life" All Taxon Bioinventory (ATBI)

Juan Garcia, McNair Scholar (2008), Sam Houston State University. Molecular and morphological evolution of Gelechioidea (Lepidoptera)

Olinda Cardenas, BIO495 (Fall 2007), Sam Houston State University. Postmortem Interval determination of a carcass using insect developmental rate models and insect successional models

Phillip Torres, Research Experience for Undergraduates (Summer 2007), Sam Houston State University. Diversity of Lepidoptera at the Center for Biological Field Studies, Sam Houston State University

Professional Society Memberships, past and current

American Society for Microbiology, current
 Entomological Society of America, current
 American Association of Forensic Scientists, intermittent
 North American Association of Forensic Entomologists, intermittent
 Lepidopterists' Society of America, intermittent
 Willi Hennig Society, past
 Society for the Study of Evolution, past

Committees Served

2008 – Present Scientific Advisory Committee, South East Texas Applied Forensic Science Facility, Chair

2017 – Present BioBlitz Committee, Department of Biological Sciences, Sam Houston State University

2017 – Present Website Committee, Department of Biological Sciences, Sam Houston State University, Chair

2017 – Present Curriculum Committee, Department of Biological Sciences, Sam Houston State University, Chair

2017 – Present College Curriculum Committee, COSET, Sam Houston State University

2012 Snodgrass Award Committee, Entomological Society of America

2009 Forensic Science Educational Conference Steering Committee, Sam Houston State University in conjunction with The American Academy of Forensic Science

2009 – 2010 HAVEN a GLTBQ safe zone program, Sam Houston State University Student-run Committee

2009 – 2012 Master of Science Forensic Science Committee, Forensic Science Program, Sam Houston State University

2008 – 2012 Scientific Advisory Committee, The Big Thicket National Preserve

2008 – 2010, 2012 Curriculum Committee, Department of Biological Sciences, Sam Houston State University

	University
2008 – 2010, 2012	Field Station Committee, Sam Houston State University
2007 – 2014	Graduate Committee, Sam Houston State University, CHAIR
2007 – Present	Student Research Award Committee, Sam Houston State University
2004 – Present	Awards Committee, The Lepidopterist’s Society of America
2002 – 2005	Graduate Studies Committee Graduate Student Representative, Voting Member
1998 – 2000	Entomology Graduate Student Association: Secretary, President

Reviewing

Manuscript

Journal of Forensic Science; International Journal of Forensic Science; Microbiome; Zootaxa; The Washington Entomological Society; The Journal of the Lepidopterists’ Society; Annals of the Entomological Society of America; Invertebrate Systematics; Biological Journal of the Linnaean Society; Cladistics.

Book

Daly and Doyle’s Introduction to Insect Biology and Diversity: ISBN 0195380673; Evolution: ISBN 0393913414; Biology, The Core: ISBN 0321735862

Grant

Sigma Xi Grants in Aid of Research, Panel Reviewer; National Institute of Justice, External Reviewer; Encyclopedia of Life, External Reviewer; Encyclopedia of Life, Panel Reviewer; National Science Foundation, External Reviewer; National Science Foundation, Panel Reviewer; Texas Academy of Science Student Research Award, Panel Reviewer; Women in Science Student Research Award, Panel Reviewer

Professional Consultation

2016	Forensic Entomologist, Beaumont, TX, Physician
2015	Forensic Entomologist, Montgomery County, TX, Conroe Police Department
2014	Forensic Entomologist, Texas Rangers
2014	Forensic Entomologist, Walker County, TX, Huntsville Police Department
2014	Forensic Entomologist, Anglina County, TX, Texas Rangers
2012	Forensic Taphonomist, Montgomery County, TX, District Attorney’s Office

Expert Witness

2012 Forensic Taphonomist, Montgomery County, TX, Larry Ray Swearingen,
Appellant v. The State of Texas

Curation

Sam Houston State University, Huntsville, Texas
The Canadian National Collection, Ottawa, Canada
The Ohio State University, Columbus, Ohio

Major Collections Studied

The Canadian National Collection, Ottawa, Canada
The Carnegie Museum, Pittsburgh, Pennsylvania
The National Museum of Natural History, Smithsonian Institute, Washington, DC
The Smithsonian Tropical Research Institution, Panama City, Panama
The Missouri Botanical Gardens, St. Louis, Missouri
The University of Arizona Herbarium and Insect Collection
Kirstenbosch Botanical Gardens, Cape Town, South Africa
Museum National d'Histoire Naturelle, Paris, France
The Finnish Museum of Natural History, Helsinki, Finland

Field Experience

Zimbabwe, Africa
Texas and surrounding states (permit holder)
Ohio and surrounding states
Ontario, Canada
Mexico
Panama
Costa Rica
Sonoran Desert, Arizona (permit holder)
Chihuahuan Desert, Arizona and New Mexico (permit holder)
Chiricuan Mountains, Arizona (permit holder)
Western Cape, South Africa (permit holder)
All Taxon Bio-Inventory of the Great Smoky Mountain National Park, Lepidoptera branch, Twig Leader
(permit holder)
All Taxon Bio-Inventory of local Columbus Parks, Columbus, OH
All Taxon Bio-Inventory of Hocking Hills area, Hocking County, OH
Arthropods of Le Salva All Taxon Bio-Inventory, Costa Rica (permit holder)
Big Bend National Park, Texas (permit holder)
"Thicket of Life" All Taxon Bio-Inventory of The Big Thicket National Preserve, TX (PI)

Internet Resources

Bucheli, S.R. 2006. <http://www.shsu.edu/~srb009/>. Information website designed to summarize current systematic and taxonomic information for the Lepidopteran superfamily Gelechioidea. Maintained in conjunction with The Mississippi State University Entomological Museum and supported by NSF grant # 0415061

Professional Education Outreach

Development of Forensic Science online training course for high school teachers

Featured in Popular Media

PNAS News Feature January 2, 2018, "[Can microbes keep time for forensic investigators?](#)" Carolyn Beans

Science Vs Podcast from Gimlet Media October 2016, "[Science Vs Forensic Science](#)" Shruti Ravindran, Diane Wu, Austin Mitchell, Heather Rogers, and Caitlin Kenne

National Geographic July 2016, "[How Science Is Putting a New Face on Crime Solving](#)" Veronique Greenwood and Max Aguilera-Hellweg

The Guardian 2015, "[Life after death: the science of human decomposition](#)" Mo Costandi

Sam Houston State University, "STAFS Facility Caters to Vast Academic Interests" (<https://www.youtube.com/watch?v=Te6kvFA3dZc>) Academic Affairs

New Scientist August 2014, "[Your death microbiome could catch your killer](#)" Anna Williams

Sam Houston State University, February 26, 2014 "[Team's Microbiology Research Works To Produce New Forensics Tool](#)" Flori Meeks

The Scientist, February 1, 2014 "[The Necrobiome: Next-generation sequencing of the bacterial assemblages that inhabit a corpse throughout decomposition improve time-of-death estimates](#)" Chris Palmer

National Public Radio, September 23, 2013 "[Could Detectives Use Microbes To Solve Murders?](#)" Rob Stein

Science News Web Edition: Tuesday, November 18th, 2008 "[Forensics' next tool: Hair-collecting caterpillars](#)" Susan Milius

Science News Print Edition: December 20th, 2008 "[Clothes moths offer forensic clues by building fuzzy, hair-flecked cases](#)" Susan Milius

Artistic Exhibitions

Sam Houston State University Entomology Harlem Shake (<https://www.youtube.com/watch?v=mIB6J-zbRW4>)

Entomology Display Cases for use by The C. A. Triplehorn Insect Collection, Ohio State University
Department of Entomology

Community Service

Girl Scouts Troop 103113

Exterminator Consultant, Huntsville, TX

Saturdays at Sam, Sam Houston State University, Huntsville, TX

Naturalist for Boy Scouts and Girl Scouts of America, Columbus, OH

Insect Outreach Program with local grade schools, Columbus, OH

Docent, Columbus Zoo, Annual Insect Fair, Columbus, OH

Founding member of Graduate Women in Science, The Ohio State University, Columbus, OH

Science Fair Judge Duties included judging science projects for area school, Columbus, OH