

Adrienne L. Brundage

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EDUCATION

Texas A&M University

PhD Candidate, Entomology (in progress)
Major GPA: 3.758, Overall GPA: 3.758

California State University, San Jose

Masters of Science, Organismal Biology 2007
Major GPA: 3.75, Overall GPA: 3.4

California Polytechnic State University, San Luis Obispo

Bachelor of Science, Plant Protection Sciences 1999
Minors: Theater and Music

Curriculum Highlights: Insect Physiology, Acarology, Ecology of Insects, Taxonomy of Immature Insects, Microbial Methods, Insect Ecology, Acarology, Seminar in Advanced Biology: Organismal Biology, Seminar in Advanced Biology: Molecular and Microbiology, Introduction to Forensic Investigation, Principles of Crime Scene Investigation, Advanced Crime Scene Investigation, Forensic Anthropology, Advanced Human Anatomy, Evolution, Statistics for Research, Molecular Ecology, Microbial Physiology

Thesis: Distribution and Abundance of Forensically Important Flies in Santa Clara County: A two year survey and analysis of Calliphoridae species collected in three habitats.

Dissertation: Fitness effects of colonization time of *Chrysomya rufifacies* and *Cochliomyia macellaria*, and their response to intra- and inter-specific eggs and egg-associated bacteria

Publications

Brundage, A. and J.Y. Honda. 2011. Seasonal and Habitat Abundance and Distribution of Some Forensically Important Blow Flies (Diptera: Calliphoridae) in Central California. *Forensic Science International*. *In Press*.

Honda, J.Y., **A. Brundage**, C. Happy, and S.C. Kelly. 2008. New records of carrion feeding insects collected on human remains. *The Pan-Pacific Entomologist*. 84(1): 29-32

Professional Associations

North American Forensic Entomology Association, Associate Member, 2004-2012

American Academy of Forensic Sciences, Trainee Member, 2003-2012

Gamma Sigma Delta, Invited Member, 2011

Entomological Society of America, Student Member, 1998-2012

Southwestern Entomological Association, Student Member, 2008-2012

Pacific Coast Entomological Association, Student Member, 1999-2007

American Association for the Advancement of Science, Professional Member, 2006-2011

Ecological Society of America, Student Member, 2008-2011

Entomology Graduate Student Organization, Student Member 2008-2011

National Science Teachers Association, Student Member 2010-2011

Organization of Professional Academic Lecturers plus Other Non-Tenure Track Faculty, Member 2008-2011

National Scholar's Honor Society, Member 2008-2011

Forensic Entomological Casework

Forensic Case Coordinator, Texas A&M Forensic Laboratory for Investigative and Entomological Sciences (F.L.I.E.S. Facility). Coordination of incoming and outgoing evidence, communication with law enforcement, organization and structuring of lab-wide evidence protocols, 2009-2011

Assistant entomological Investigator, Cases 030, 031, 032, 036, 037, 038 insect identification, evidence interpretation, time of colonization estimation, report preparation 2008-present

Reviewer, Case 050, larval identification, evidence interpretation, degree day calculation, time of colonization estimation, review of submitted report, San Antonio, October 2010

Reviewer, Case 034, larval identification, evidence interpretation, degree day calculation, time of colonization estimation, review of submitted report, Kentucky, July 2010

Entomological investigator, Case 039, insect identification, evidence interpretation, and time of colonization estimation, report preparation, Cedar Hill, February 2010

Reviewer, Case 035, larval identification, evidence interpretation, degree day calculation, and time of colonization estimation, Montana, December 2009

Lead entomological investigator, Case 040, insect identification, evidence interpretation, and time of colonization estimation, Harris County, August 2009

Lead entomological investigator, Case 036, larval identification, evidence interpretation, degree day calculation, time of colonization estimation, Tarrant County, June 2009

Assisted Dr. Jeffery K. Tomberlin, Case 029 larval identification, evidence interpretation, degree day calculation, time of colonization estimation, Harris County, July 2008

Assisted Dr. Jeffery K. Tomberlin, Case 028 larval rearing and care, identification and interpretation of entomological evidence, Harris County, May 2008

Assisted Det. Ronald Bruess, various cases, interpretation of entomological evidence, Santa Clara County Sheriff's Office, 2003-2007

Assisted Santa Clara County medical examiner's office, various cases, interpretation of entomological evidence, 2004

Assisted Dr. Jeffery Y. Honda, various cases, larval rearing and care, identification and interpretation of entomological evidence, Santa Clara County, 1999-2007

Entomological/Teaching Experience

Lecturer in Biology, Blinn College, 2011

Organization and presentation of lectures in Biology, including nutrition, anatomy and physiology, and general biology. Assignment and correction of papers, projects, quizzes and exams designed to teach and test specific knowledge of biological concepts and application of this knowledge; leadership and management of 36 students

Lecturer in Forensic Entomology, Baylor University, 2011

Organization and presentation of lectures and labs in Forensic Entomology; Assignment and correction of papers, tests, quizzes, and projects designed to teach and test specific forensic knowledge; leadership and management of 22 upper division students

Lead Researcher, Mentor and Creator, Undergraduate Entomological Research Experience Program, 2009-present

Organization of undergraduate research experience in the Forensic Laboratory of

Investigative and Entomological Sciences (F.L.I.E.S. Facility, Texas A&M University). Program allows undergraduate students to experience the research process while assisting on active research projects. Students are taught basic skills in literature-based research and writing, experimental design, and experimental management through one-on-one meetings and written feed back. Students are required to make observations, record and analyze data, design experiments, and compose a final paper. Quality of research is assessed and published if appropriate.

Graduate Assistant, Medical Entomology, ENTO 405, 2011

Assistant to Dr. Albert Mulenga during ENTO 405 course. Organization and presentation of labs and demonstrations for students; teaching of laboratory sections; grading of assignments; record keeping and input of grades; maintenance of entomological teaching collection

Graduate Assistant, General Forensic Sciences, FIVS 205, 2010

Assistant to Dr. Jeffery K. Tomberlin during FIVS 205 course. Organization and presentation of lectures, labs, and demonstrations for 100 students; grading of assignments; record keeping and input of grades

Lecturer in Forensic Entomology, Texas A & M University, 2008-2009

Organization and presentation of lectures and labs in Forensic Entomology; Management of teacher's assistants; assignment and correction of papers, tests, quizzes, and projects designed to teach and test specific forensic knowledge; leadership and management of 140-180 students

Mentor, Undergraduate Research Experience, Summer 2009

Mentor and supervisor of undergraduate students as students design and execute entomology based research projects in the F.L.I.E.S. lab at Texas A&M University.

Mentor, Research Experience for Undergraduate Program Summer 2008

Mentor and supervise an advanced undergraduate researcher over the summer months. Duties included supervision of day-to-day activities, design and analysis of basic research projects, and review of resulting manuscript

Manuscript Peer Review 2008-2011

Peer review and correction of submitted manuscripts for professional journals Enomologica, Journal of Medical Entomology, and Journal of Forensic Sciences

Forensic Entomology Intern, Santa Clara County Sheriff's Office, 2007

On call as local forensic entomologist; available to collect entomological evidence at crime scenes and autopsy; analysis of entomological evidence and completion of report including post mortem interval estimation

Training Supervisor, Entomological Evidence Recovery, 2006-2007

Design and implementation of all-day training seminars targeted at crime scene

investigators and other sheriff's office personnel; assist forensic anthropologist during clandestine grave removal seminars

Lecturer, San Jose State University, 2005-2007

Organization and presentation of lectures and labs in a variety of classes, including Human Biology, Bacteriology, and Human Understanding; Management of teacher's assistants, lab staff, and graduate assistants; assignment and correction of papers, tests, and quizzes designed to teach and test knowledge; leadership and management of 400-plus students each semester

Forensic Entomology Intern, Santa Clara County Medical Examiner's Office, 2004

On call as local forensic entomologist; available to assist during autopsy of severely decomposed remains; collection of entomological evidence during autopsy

Assistant to Forensic Entomologist Dr. Jeffery Y. Honda, 1999-2005

Assist forensic entomologist with evidence collection and management; supervise larval rearing and care; assist in post mortem interval estimation

Professional Expert in Entomology and Botany, P³ Summer Institute, 2007

Assist as science pedagogy expert specializing in insect and plant research in NSF grant designed to expose grade school teachers to the California science standards

Graduate Assistant, San Jose State University, 1999-2005

Organize and teach lab sections of science classes, including botany, zoology, cell biology, human biology, microbiology, and bacteriology

Insect Lab Technician, HotLix Candy Company, 1996

Rear and prepare insects used in candy product; maintain cultures of insects including *Tenebrio molitor* (mealworms), several Gryllidae (crickets), and Tipulidae (crane flies)

Apiary Manager, Cal Poly San Luis Obispo, 1995

Student project, responsible for six month management of campus apiary

Orchard Manager, Cal Poly San Luis Obispo, 1994-1995

Student project, responsible for one year management of campus citrus and avocado orchard, including harvest, pest management, tree replacement, cold management, and harvest sales

Workshops

Forensic Educator Teacher's Training, August 2010

Organization and presentation of forensic entomology activities appropriate for

classrooms. Activities were presented to Junior High and High School teachers during a week-long training event.

Youth Adventure Program General Forensics Workshop, July 2010

Organization and presentation of a one week educational camp for advanced high school students focusing on several aspects of forensic science. Topics included the scientific method, microscopy, forensic entomology, blood spatter, tool marks, tire and shoe impressions, forensic anthropology, blunt and sharp force trauma, forensic pathology, and traumatic injury. Topics were presented in both lecture and hands on lab format

Youth Adventure Program General Forensics Workshop, Lead Organizer, July 2009

Organization and presentation of a one week educational camp for 24 advanced high school students focusing on several aspects of forensic science. Duties included organization and management of volunteer teachers, writing and preparation of labs and lectures, organization of supplies, and organization of off-site field trips. Topics included best practices in forensics, Daubert standards, forensic entomology, observational skills, fingerprinting, blood spatter, tool and tire marks, blunt and sharp force trauma, forensic pathology, forensic chemistry, questioned documents, and general crime scene investigation.

Presenter, Leon County Kid's Kamp, June 2009

Organization and presentation of an afternoon of forensics labs geared towards 3rd through 9th graders.

Youth Adventure Program General Forensics Workshop, July 2008

Organization and presentation of a one week educational camp for advanced high school students focusing on several aspects of forensic science. Topics included the scientific method, microscopy, forensic entomology, blood spatter, tool marks, tire and shoe impressions, forensic anthropology, blunt and sharp force trauma, forensic pathology, and traumatic injury. Topics were presented in both lecture and hands on lab format.

Forensic Entomology Training, Cedar Hill Police Department, December 2009

Organization and presentation of a one day, experience-based training for members of law enforcement. Duties included organization and management of volunteer presenters, writing, preparation, and delivery of presentations and crime scene training for attendees.

Youth Adventure Program General Forensics Workshop, Lead Organizer, July 2009

Organization and presentation of a one week educational camp for 24 advanced high school students focusing on several aspects of forensic science. Duties included organization and management of volunteer teachers, writing and preparation of labs and lectures, organization of supplies, and

organization of off-site field trips. Topics included best practices in forensics, Daubert standards, forensic entomology, observational skills, fingerprinting, blood spatter, tool and tire marks, blunt and sharp force trauma, forensic pathology, forensic chemistry, questioned documents, and general crime scene investigation.

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Science Standards Training for K-12 teachers, June 2007

Organization and presentation of a one week workshop for first grade teachers in California. As part of an NSF grant, teachers were trained in the new California science standards. Co-taught with a current first grade teacher, participants were exposed to the general science of botany, given hands-on training in basic botany principles, and provided with ideas for incorporating botany into the first grade classroom.

Presentations at Professional Meetings

-**Brundage, A.L.** and J.K. Tomberlin. 2011. Effects of Temporal Priority on Interactions Between *Cochliomyia macellaria* and *Chrysomya rufifacies* (Diptera: Calliphoridae) Larvae on a Carrion Resource. Entomological Society of America Annual Meeting. Reno, NV.

-**Brundage, A.L.** and J.K. Tomberlin. 2011. Effects of Temporal Priority on Interactions Between *Cochliomyia macellaria* and *Chrysomya rufifacies* (Diptera: Calliphoridae) Larvae on a Carrion Resource. North American Forensic Entomological Association Annual Meeting. College Station, Texas.

-**Brundage, A.L.** and J.K. Tomberlin. 2011. The effects of priority colonization of carrion on two forensically important blow fly (Diptera: Calliphoridae) species. Forensic Entomology and its Implications in Medicine. Kuala Lumpur, Malaysia.

-**Brundage, A.L.** and J.K. Tomberlin. August 2010.

The effects of priority colonization of carrion on two forensically important

blow fly (Diptera: Calliphoridae) species. Thirteenth Annual Graduate Student Forum, Texas A&M University

- Brundage, A.L.** and J.K. Tomberlin. 2009. Attraction of two forensically important fly species: *Chrysomya rufifacies* (Macquart) and *Cochliomyia macellaria* (Fabricius) to inter- and intraspecific eggs. American Academy of Forensic Sciences Conference. Denver, Colorado.
- Pechal, J.L., **A.L. Brundage**, E.T. Brandt, C.L. Parks, J.K. Tomberlin, and J. Melbye. 2009. First insect succession study on a human cadaver in Texas. American Academy of Forensic Sciences Conference. Denver, Colorado.
- Brundage, A.L.** and J.Y. Honda. 2008. Seasonal Distribution and Abundance of Forensically Important Flies in Santa Clara County North American Forensic Entomological Association Conference. Atlantic City, New Jersey.
- Brundage, A.L.** and J.Y. Honda. 2004. Seasonal Distribution of Forensically Important Flies in Santa Clara County California Association of Criminalists Spring Conference. San Mateo, California.

Posters at Professional Meetings

- Brundage, A.L.** and J.Y. Honda. 2005. Seasonal Distribution of Forensically Important Flies in Santa Clara County American Academy of Forensic Sciences Conference. New Orleans, Louisiana

Invited Presentations

- MENSA, Austin Branch, Annual Meeting, Guest Lecture, September 2011
A one-hour invited lecture entitled "Forensic Entomology: Case studies and Science" Special consideration given to entomological techniques used at the crime scene; an open 1 hour question and answer session followed the lecture
- Insects in Society ENTO 322 Guest Lecture, August 2011
A one-hour invited lecture entitled "Forensic Entomology: Scope and Case Studies"
- Texas Criminal Defense Lawyer's Association, Invited Speaker, October 2010
Teaching lecture entitled: "Forensic Entomology in the Court Room"
A one hour lecture outlining the use of forensic entomology in the courtroom with special consideration given to entomological techniques used

at the crime scene and in the lab; calculations used for time of colonization estimation; and current research in the area of forensic entomology

Forensic Science Educator Training Conference, Sam Houston State University, August 2010

Organization and presentation of one full-day seminar on forensic entomology designed to train middle and high school teachers to incorporate entomology into their science class rooms. Design of classroom appropriate material, including handouts, readings, and lab activities.

Forensics Sciences FIVS 205 Guest Lecture, September and October 2010

Three invited one-hour lectures entitled “Forensic Psychology and Psychiatry,” “Urban and Stored Products Entomology” and “MedicoLegal Entomology”

Citizen’s Police Academy, Invited Expert, August 2010

Invited presentation entitled: “Forensic Entomology: Scope, Evidence Collection, and Evidence Analysis” Presentation was given twice for members of the citizen’s police academy in Texas, along with crime scene investigators and detectives needing to complete continuing education credits.

-Tomberlin, J.K., **A. Brundage**, R. Mohr, M.E. Benbow, T. Crippen, and A. Tarone. Invited 2010. Potential role of microbes regulating attraction and colonization of rendered animals by blow flies (Diptera: Calliphoridae). Athens Institute for Education and Research Agriculture. Athens, Greece.

Texas 4H Entomology Training, February 2010, 2011

Invited to present beginning entomological concepts to students preparing for the 4H entomology exam

-**Brundage, A.L.** and J.K. Tomberlin. August 2009. Attraction of two forensically important fly species: *Chrysomya rufifacies* (Macquart) and *Cochliomyia macellaria* (Fabricius) to inter- and intraspecific eggs. Twelfth Annual Graduate Student Forum, Texas A&M University

Fort Worth Medical Examiner’s Office, Invited Speaker, August 2009

Invited presentation entitled: “Forensic Entomology: Scope and Current Research”

Graduate Student Orientation Texas A&M University, Invited Panel Member, August 2009, August 2010

Panel addressing the responsibilities and challenges of being a graduate student at Texas A&M University

REU-EXCITE Lab Tour June 2009, June 2010

Tour and explanation of research in the F.L.I.E.S. lab at Texas A&M University for incoming REU-EXCITE students

Biological Student's Association: Veterinary Medicine Branch, March 2009

Key note speaker at the monthly meeting. Presentation entitled "Forensic entomology from a veterinary standpoint"

Forensic and Investigative Sciences Seminar Series, FIVS 485 February 2009

Invited presentation entitled: "Forensic Entomology Scope and Current Research"

Texas Criminal Defense Lawyer's Association, Invited Speaker, October 2008

Teaching lecture entitled: "Forensic Entomology and You"

A one hour lecture outlining the use of forensic entomology in the courtroom

Forensics Sciences FIVS 205 Guest Lecture, October 2008

Two lectures entitled: "The Scope of Forensic Entomology" and "Medico-criminal Entomology"

Two 1 hour lectures teaching forensic science undergraduate students about the extent of forensic entomology in both civil and criminal cases.

Entomology 322 General Entomology, Guest Lecture July 2008

Lecture entitled: "The Forensic Entomologist at the Crime scene: How to investigate a crime scene for entomological evidence"

1 hour lecture teaching entomology undergraduate and graduate students how to investigate a crime scene as an entomologist

Aggie Summer Institute oral presentation June 2008

Presentation entitled: "Introduction to Forensic Entomology"

45 minute presentation for high school aged students interested in research and science

Research Experience for Undergraduates (REU) oral presentation, May 2008

Presentation entitled: "Introduction to Forensic Entomology at Texas A&M University" 30 minute presentation welcoming new undergraduates to the entomology department, and explaining the concept of forensic entomology

and current research

Texas A&M Future Students tour and oral presentation, March 2008
Introduction to forensic entomology research and facilities at Texas A&M University for 60 future students

San Jose High School, oral presentation, May 2004
1 hour introductory level presentation for 30 high school science students including forensic entomology, IPM, and general collection techniques; lecture and hands on learning opportunities presented

Positions

Secretary, North American Forensic Entomological Association, 2009-2011

Member, Planning Committee, North American Forensic Entomological Association Annual Conference, 2011

Vice President, Entomological Graduate Student Organization, 2009-2010

Graduate Student Representative, Department Head Search Committee, 2009-2010

Training

Exploring Genetic Diversity: Mapping the Genetic Landscape through Next Generation Sequencing, August 2010

Seminar sponsored by AAAS which detailed genetic techniques including Q-PCR, pyrosequencing, and traditional PCR

Recent Advances in Liquid Chromatography and Mass Spectrometry for Applications in a Variety of Disciplines in the Forensic Sciences, February 2009

General workshop explaining the most commonly used liquid chromatography and mass spectrometry techniques in forensic toxicology

General Lab Safety Training, August 2008

General workshop designed to elucidate hazards, rules and regulations in the normal research lab, and highlight proper lab safety techniques, including proper response to emergency situations and necessary documentation for reagents and equipment

Teacher's Assistant Safety Training, August 2008

One day program designed to present common hazards in the teaching lab, reinforce rules and regulations, and train assistants to handle emergencies

Forensic Scientists and Criminal Investigations, June 2008

General summary of scientists involved with criminal investigations, including

in-service seminars, credentialing, references, background investigations, internships, surface recovery of skeletal remains and clandestine grave exhumations, crime scene behavior, evidentiary procedures, evidence collection, chain of custody, court room demeanor and testimony, and cold case homicide investigations

Engaging Students in Classroom Discussion, January 2008

Workshop focusing on managing successful classroom discussions, stimulating questions, assessing for student learning, probing for deeper thinking, and encouraging participation from all students

Lecturing Well (Teaching Strategies Series Session I), January 2008

Workshop focusing on developing and presenting effective lectures. Presented by Texas A&M University Center for Teaching Excellence

Forensic Entomology and Anthropology, February 2005

Workshop moderated by professional forensic anthropologists and entomologists presented at the American Academy of Forensic Sciences annual meeting. Curriculum included basic investigative techniques in entomology and anthropology, case studies, lectures, and discussion

Honors and Awards

NAFEA Student Presentation Award, Second Place, PhD level, 2011

Awards presented for outstanding research presentations by PhD and non-PhD graduate students during the North American Forensic Entomological Association annual meeting.

Knipling-Bushland-Swahrf Graduate Student Scholarship, 2011

Given to one full time graduate student each year to strengthen research, extension and instructional programs in the area of livestock and wildlife entomology

Student Enhancement and Endowment Scholarship, 2011

A competitive grant based on merit and need given to graduate students in the department of entomology at Texas A&M University to enhance graduate studies through travel, presentation, and professional meetings

Outstanding Graduate Student Award--PhD, Department of Entomology, 2010

Given to one PhD student each year in the department of entomology at Texas A&M University who demonstrates outstanding research and academic achievement

Vice Chancellor's Award in Excellence, Graduate Student Teaching 2009

Given to one graduate student each year who shows outstanding achievement in teaching, stimulation of students to achieve and excel, evidence of respect and affection of students, effectiveness of teaching ability, demonstration of new and innovating approaches to teaching methodology, and participation in professional societies and associations

J.H. Benedict, Sr. Memorial Graduate Student Award 2009

Given to one entomology graduate student each year who shows outstanding academic and extra curricular achievement

Susan M. Arseven '75 Make-A-Difference Memorial Award 2009

Given to one student at TAMU who shows outstanding academic achievement in the face of challenges

Duncan Scholarship for Outstanding Biology Student 2001

Given to one biology student at SJUS each year that shows outstanding academic achievement

Graduate Assistant Grant 1999-2002

Enterprise Project Student of the Year 1994

Additional Experience

Owner, New Republic Brewing Co. and Midnight Hour Brewers Inc., 2010-2012

Harpist, Owner of Adrienne Brundage Harp, 1994-2012

Head Steward, Sam Adams Long Shot Competition, June 2008-2009

Organization and management of 200 flights of competition beer during Sam Adams' annual competition; management of 30 general stewards and 150 beer judges

Blogger, BugNet, The Bibliophiles, and BioGRE, 2007-2012

Writing content and maintaining integrity of three literature and science-based blogs; response to public questions and comments on each

Certificate in Prehospital Emergency Care, 2007

General Steward, Sam Adams Long Shot Competition, June 2007

Organization and management of 20 beer judges and 8 flights of competition beer during Sam Adams' annual competition

Owner, 3 Llamas Web Hosting, 2000-2001

Customer Service Associate, San Jose State Post Office, 1999

Customer Service Representative, The Grid Internet Services, 1998-1999

Customer Service Associate, Hollywood Video, 1997-1998

Rape Crisis Intervention Counselor, San Luis Obispo Rape Crisis Center, 1996-1997