

115th Annual Meeting
of the
Texas Academy of Science



Program and Abstracts



**THE UNIVERSITY
OF THE BIG BEND**

March 1-3, 2012
Sul Ross State University
Alpine, Texas

THURSDAY

4:00 PM	Registration and Check-in	Morgan University Center
6:00 PM	TAS Social	Kokernot Lodge
7:30 PM	The Collegiate Academy: Starting and Maintaining a Local Chapter	Warnock Science Building
6:45 PM	Hindsight is 20/20: What I wish I knew about graduate school before I went	Kokernot Lodge
7:30 PM	History of Texas update by Ray Mathews	Warnock Science Building
7:30 PM	Science in an Age of Social Media Panel Discussion	Warnock Science Building
9:00 PM	Screening of PHD Movie (based on the PHD comic strip)	Marshall Auditorium

FRIDAY

7:30 AM	Registration, Check-in, and Breakfast	Morgan University Center
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Anthropology Oral Presentation I - WSB 204

8:30 AM	G	72	Cobbles and quandaries: Prehispanic land use strategies and residence in northwestern Belize Antonia L Figueroa, The University of Texas at San Antonio	
8:45 AM	G	34	Geoarchaeological investigations of natural site formation processes at the Gault Site, a Paleoindian and pre-Clovis site in Bell County, Texas Anastasia Gilmer, Texas State University, San Marcos, TX.	
9:00 AM	G	145	Underwater geoarchaeological survey of the San Marcos Springs Jacob Hooge, Texas State University, San Marcos, TX	
9:15 AM	N S	131	Analysis of Quarrying behavior at Alibates Quarry Britt Bousman*, Bob Wishoff, Chris Davis-(Center for Archaeological Studies and Department of Anthropology, Texas State University-San Marcos), and Paul Katz (Prehistoric Resources Identification, Assessment and Management, Inc.)	
9:30 AM	G	180	On the burned rock trail: Using GIS to model site selection in the Lower Pecos Canyonlands Charles W. Koenig, Texas State University, San Marcos, TX	
9:45 AM	G	44	Faunal analysis at the Rowe Valley Site, 41WM437: A case study in Toyah subsistence Haley E. Rush, Texas State University, San Marcos, Tx	
10:00 AM			View Anthropology Posters - list at end of section	Pete P. Gallego Center

Anthropology Oral Presentation II - WSB204

- | | | | | | |
|---------------------|--------|-----|--|--|----------------|
| 10:45
AM | N
S | 213 | Paleoindians in the Big Bend: Preliminary investigations at the Genevieve Lykes Duncan Site (41BS2615), 02 Ranch, Brewster County | William A. Cloud*, Robert J. Mallouf, Richard W. Walter, Roger Boren, Robert Gray, Samuel S. Cason, Elizabeth A. Baker, Dawnella Petrey, and David W. Keller, Center for Big Bend Studies, Sul Ross State University, Alpine, Texas | |
| 11:00
AM | N
S | 83 | Exploring early archaic and paleoindian occupations at Site 41BX1888 on the San Antonio River, Bexar County, Texas | Cynthia M. Munoz, UT San Antonio, Center for Archaeological Research | |
| 11:15
AM | N
S | 173 | Stable carbon and nitrogen isotopic analysis of human remains from the Coleman site (41BX568), a Late Prehistoric occupation in Central Texas | Jennifer L. Zonker Rice, Our Lady of the Lake University, San Antonio, Tx and Kirsten Verostick, Laura Carbajal, Cynthia Munoz, Nathanael Dollar, Robert Hard, and Raymond Mauldin*, University of Texas at San Antonio, San Antonio, Tx. | |
| 11:30
AM | G | 247 | Getting through the winter: Dry season resources and their influence on owl monkey (<i>Aotus azarai</i>) reproduction | Griëtte van der Heide, University of Texas at San Antonio, San Antonio, Texas, and Victor Dávalos, Cecilia Juarez, Fundación ECO, Formosa, Argentina, and Eduardo Fernandez-Duque, University of Pennsylvania, Philadelphia, PA and CECOAL-Conicet, Corrientes | |
| 11:45
AM | G | 183 | Male dominance structure in two multimale groups of mantled howlers (<i>Alouatta palliata</i>) at Hacienda La Pacifica, Costa Rica | Lisa C. Corewyn*, University of Texas at San Antonio, TX; Margaret R. Clarke, Houston Community College Southwest, Houston, TX; and Kenneth E. Glander, Duke University, Raleigh-Durham, NC | |
| 12:00
PM | | | Anthropology Section Meeting | | WSB 204 |

Anthropology Posters

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|---|----------|---|---|
| G | P11 | The Texas Time Machine: Radiocarbon and the Woodland Period Occupation in East Texas | Robert Z. Selden Jr.* and Timothy K. Perttula, Texas A&M University |
| G | P12
5 | Reconstructing seasonal diet in the Lower Pecos using stable isotopes in human hair | Kirsten Verostick*, Robert Hard, Cynthia Munoz and Raymond Mauldin, Department of Anthropology and Center for Archaeological Research, UT San Antonio |
| G | P14
0 | Cranial variation among three regional groups in Mexico | Cristina Figueroa-Soto BS*, Kate Spradley PhD, Texas State University, San Marcos, TX |

- G P17 **Genetic distance in populations of African ancestry by allele**
6 **frequencies**
Lauren Springs, Texas State University, San Marcos, TX
- U P21 **Microscopic use-wear analysis of plant processing tools from**
6 **an Early Archaic earth oven facility**
Sarah Himes, Texas State University

Biomedical Oral Presentations - WSB 321

- 8:30 AM N S 230 **Separation-induced depressive behavior in the Syrian hamster,**
Mesocricetus auratus
Caurnel Morgan*, Texas A&M University, College Station, TX, and
Weill Cornell Medical College of Cornell University, New York, NY,
John L. Shannonhouse, Bryan L. Clossen, Texas A&M University,
College Station, TX, Daniel C. York, and Danielle M. Grater, W
- 8:45 AM U 111 **Pharmacological Action of L-Cysteine on Bovine Isolated Irides**
Destinee Stroud, Madhura Kulkarni, Ya Fatou Njie-Mbye, Sunny E.
Ohia., Department of Pharmaceutical Sciences, College of
Pharmacy and Health Sciences, Texas Southern University,
Houston, TX 77004
- 9:00 AM U 124 **Locating genes responsible for N-acetylglucosamine**
catabolism by *Pseudomonas aeruginosa*, a prominent
respiratory pathogen in cystic fibrosis patients
John Taylor Gabriel*, St. Edward's University, Austin, TX; Aishwarya
Korgaonkar and Marvin Whiteley, University of Texas at Austin,
Austin, TX.
- 9:15 AM U 126 **Quantification and identification of bacteria present on**
tomatoes collected from markets in the Austin, Texas area
Madison N. Shaft* and Dr. Patricia Baynham, St. Edward's
University, Austin, TX

9:30 AM **Biomedical Section Meeting**

WSB 321

1:30 PM **View Biomedical Posters**

Pete P. Gallego Center

Biomedical Posters

- U P22 **What is the microbial content of drinks obtained from soda**
fountain dispensers?
Jessica Svoboda and Patricia Baynham; St. Edward's University
- G P30 **Sensitivity of Interleukin-2-treated HuT 78 cells to antitumor**
drugs that inhibit DNA Topoisomerase I or DNA Topoisomerase
II
Varun Tatineni* and David Foglesong, University of the Incarnate
Word, San Antonio, TX.
- U P11 **How well do antibacterial contact lens solutions inhibit the**
5 **growth of *Pseudomonas aeruginosa*?**
Tiffany La and Patricia J. Baynham
- U P15 **The relationship of mono and dual biofilms to antimicrobials**
0
Aaron Ramirez*, Valarie Cavazos, Robert Pelliccia, and Donna

Janes, Concordia University-Texas, Austin ,TX

- U P15 **The effect of natural sugars and artificial sweeteners on biofilm formation**
4
Haley Phillips, Natasha McCown, Portia Mosley, Gavin Ellis, Danielle Martinson, and Donna Janes, Concordia University-Texas, Austin, TX
- G P16 **Uptake and localization of serotonin in *Candida albicans* yeast cells**
5
Alissa Tuttle* and James Masuoka, Midwestern State University, Wichita Falls, TX
- G P16 **Survey of the presence of *Naegleria fowleri* in lakes in Wichita County, Texas**
6
Kriston McLaughlin* and James Masuoka, Midwestern State University, Wichita Falls, TX
- U P23 **A survey of Influenza A within feral swine (*Sus scrofa*) and javalina (*Pecari tajacu*) of Trans-Pecos Texas**
5
Anthony Morales*, Desirae Melton, Kody Kubala, Christopher Ritzi, and Jackie Denson , Sul Ross State University, Alpine, TX
- U P23 **An analysis of the prevalence of *Trichinella sp.* found within feral swine (*Sus scrofa*) and javalina (*Pecari tajacu*) of Trans-Pecos Texas**
8
Desirae Melton*, Anthony Morales, Kody Kubala, Christopher Ritzi and Jackie Denson , Sul Ross State University, Alpine, TX.
- U P24 **A survey of West Nile Virus (WNV) exposure within feral swine (*Sus scrofa*) and javalina (*Pecari tajacu*) of Trans-Pecos Texas**
0
Jonathan Navarrete*, Jodi Carnes, Kody Kubala, Christopher Ritzi and Jackie Denson, Sul Ross State University, Alpine, TX.

Botany Oral Presentation Session I - WSB 107

- 8:30 AM U 107 **A comparison of root iron uptake rates in *Carya aquatica* and *Carya illinoensis***
Gretchen E. Kroh*, St. Edward's University, Austin, TX, Larry J. Grauke, USDA-ARS Pecan Breeding and Genetics, Somerville, TX , and Michael A. Grusak, USDA-ARS Children's Nutritional Research Center, Department of Pediatrics, Baylor College of Medicine,
- 8:45 AM U 152 **Are glutamate receptor-like *Arabidopsis thaliana* tolerant to AI?**
Vonda Thompson*, Chase Johnson, and Magaly Rincon-Zachary, Midwestern State University, Wichita Falls, TX.
- 9:00 AM G 188 **Floral scent production in the carrion flower genus *Stapelia* (Apocynaceae)**
Johann Souss* and David E. Lemke, Department of Biology, Texas State University, San Marcos, TX.
- 9:15 AM U 174 **Clinal geographic variation in mescaline concentration among Texas populations of *Lophophora williamsii* (Cactaceae)**
Diana Hulsey*, Martin Terry, M. Abul Kalam, Sul Ross State University, Alpine, TX, Norma Fowler, University of Texas at Austin, Austin, TX and Paul Daley, California Pacific Medical Center, San Francisco, CA

9:30 AM U 85 **Biogeography of *Mentzelia thompsonii* (Loasaceae) on the Colorado Plateau**
Emily Crain*, Elizabeth Lurz, Jonathan Stites, and Joshua M. Brokaw, Abilene Christian University, Abilene, TX

10:00 AM

View Botany Posters - see list at end of section

Pete P. Gallego Center

Botany Oral Presentation Session II - WSB 107

10:45 AM N S 221 **Seasonal occurrence of the red algal genus *Batrachospermum* (Rhodophyta: Batrachospermales) in the South Concho River of west Texas**
Ned E. Strenth* and Lauren Langley, Angelo State University, San Angelo, TX

11:00 AM N S 242 **Germination ecology of the native legumes, *Sesbania drummondii* and *Glottidium vesicarium***
Michael A. Grusak, USDA-ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine, Houston, TX

11:15 AM N S 2 **The effects of drought and record high temperatures on Texas Kangaroo Rats in Wichita County, Texas**
Allan D. Nelson*, Jim R. Goetze, and Rebecca J. Nelson; Department of Biological Sciences, Box T-0100, Tarleton State University, Stephenville, TX 76402

11:30 AM

Botany Section Meeting

WSB 107

Botany Posters

U P42 **Relationship between seed pod production, number of seeds, and seed mass in *Gleditsia triacanthos* L. (Fabaceae)**
Jacob A. Kemmer*, Corin M. Olivas, Jodi L. Schumacher, and Herbert D. Grover

U P43 **Patterns in Seed Pod and Seed Production between *Gleditsia triacanthos* L. (Fabaceae) trees on the Wayland Baptist University campus, in Plainview, Texas**
Brittnay D. Walton*, Kady Pryde, and Herbert Grover

U P75 **Invasive grass impacts on growth rates of native plants of South Texas (and vice versa)**
Juan Chavez*, Paul Mata, Logan Alcala, Ana Mireles, and J. Andrew McDonald, University of Texas-Pan American, Edinburg Texas.

U P82 **Biogeography of *Mentzelia thompsonii* (Loasaceae) on the Colorado Plateau**
Emily Crain, Elizabeth Lurz*, Jonathan Stites, and Joshua M. Brokaw, Abilene Christian University, Abilene, TX

G P21
0 **A Vegetation Survey of Goliad Navy Airfield, Goliad County, Texas**
Leah Rhyne* and Roy Lehman, Texas A&M University-Corpus Christi, Corpus Christi, TX.

Cell and Molecular Biology Oral Presentations - WSB 307

1:30 PM		View Cell and Molecular Biology Posters - see list at end of section	Pete P. Gallego Center
2:30 PM	U	39 The role of <i>SATB2</i> in zebrafish craniofacial development Jenna Rozacky* ¹ , Kelly Sheehan-Rooney ² , and Johann Eberhart ² St. Edwards's University, Austin, TX ¹ ; The University of Texas, Austin, TX ²	
2:45 PM	U	273 Cytotoxic and apoptotic effects of <i>Zingiber officinale</i> (Ginger Root), <i>Curcuma longa</i> (Turmeric), <i>Trigonella foenum-graecum</i>, <i>Sanguinaria canadensis</i> (Bloodroot), and <i>Withania somnifera</i> (Ashwagand) Jarrett Ross*, Libby Saultz, Trevor Burrow, Stephanie Whitaker, Jenna Wilson, Gary O. Gray, Adam J. Reinhart, Wayland Baptist University, Plainview, TX	
3:00 PM	U	60 Can oil of chenopodium and Alka-Seltzer washes reduce <i>Escherichia coli</i> O157:H7 and <i>Salmonella enterica</i> on spinach? Anabel Rodriguez*, Patricia J. Baynham, St. Edward's University, Austin, TX	
3:15 PM	U	84 Effects of titanium dioxide carbon nanotubes on human fetal osteoblast cells Shantell Phillips, Edidiong C. Obot, Bobby L. Wilson, Renard L. Thomas; Texas Southern University	
3:30 PM		Cell and Molecular Biology Section Meeting	WSB 307

Cell and Molecular Biology Posters

U	P33	Oh, no! Where's my head? The effects of a potassium channel blocker (SCH-28080) on behavior and regeneration in <i>Lumbriculus variegatus</i> Diaz, Christopher M., Dunne, Kathryn*, Mendez, Paola, Martinez-Acosta, Veronica G; Univ. of the Incarnate Word; Biology Dept. San Antonio, TX 78209
U	P56	The effects of glutaraldehyde on the CNS development in <i>Drosophila melanogaster</i> Taylor Henegar*, Lisa Goering, St. Edward's University, Austin, TX
U	P63	The effects of genetic background on the expressivity of EGFR pathway mutations affecting <i>Drosophila melanogaster</i> eggshell patterning Catherine Vaziri* ¹ , Tony Voong ¹ , Ian Dworkin ² and Lisa M. Goering ¹ ¹ St. Edward's University, Austin, Texas; ² Michigan State University, East Lansing, Michigan.
U	P64	Regenerator 3: Rise of the Ophiuroidea Will J. Pickard*, Eric F. Christensen, Ana Beardsley Christensen, Lamar University, Beaumont, TX
U	P65	Effect of dorsomorphin on BMP pathway and craniofacial development Ivan Pulido*, St. Edward's University, Austin, TX and C. Ben Lovely, Johann Eberhart, Institute for Cellular and Molecular Biology,

University of Texas at Austin, Austin, TX

- G P66 **Identification of microsatellite markers in *Peromyscus leucopus***
Prakash Dhanjani* and Dr. Jon Scales, Midwestern State University
- U P12 **Identification of novel genes involved in *Pseudomonas aeruginosa* biofilm production**
Goldie da Costa*, Patricia Baynham, St. Edward's University, Austin, TX, Holly K. Huse, and Marvin Whiteley, University of Texas at Austin, Austin, TX
- U P13 **A supervening study into insecticide resistance**
Evan Jones* and Qiang Xu, Abilene Christian University, Abilene, TX.
- U P20 **Effects of ethanol on CNS development and anterior-posterior axis patterning in *Drosophila melanogaster***
Matthew Perez*, Lisa Goering, St. Edward's University, Austin, TX
- U P22 **The effects of pesticides on the growth of *Escherichia coli* O157:H7 and *Azotobacter vinelandii* in soil samples**
Erika Guin* and Patricia J. Baynham, St. Edward's University
- G P22 **Mixed model characterization of *Drosophila* embryonic *NPFR1* expression pattern**
Mike Cashin*, Amaris Guardiola, Angelo State University, San Angelo, TX
- U P22 ***Kekkon 1*: An inhibitor of the epidermal growth factor receptor pathway**
Catherine Hughes* and Lisa M. Goering
- U P26 **Age and gender comparisons of estrogen receptor- α mRNA in rat brain**
Clinton T. Taylor*, Danielle D. Grove, Biology Department, Texas Lutheran University, Seguin, TX
- U P27 **Characterization of differentially expressed genes in *gata3* mutants**
Jacare Cardoza*, St. Edwards University, Austin, TX, Johann Eberhart and Kelly Sheehan-Rooney, University of Texas, Austin, TX.

Chemistry and Biochemistry Oral Presentations Session I - WSB 307

- 8:30 AM U 37 **Partial Purification and Characterization of 4T1 Murine Breast Cancer Cell Cytotoxins from *Curcuma longa***
Trevor Burrow*, Libby Saultz, Stephanie Whitaker, Jenna Wilson, Jarrett Ross, Adam J. Reinhart and Gary O. Gray, Wayland Baptist University, Plainview, TX
- 8:45 AM U 87 **Extracting and analyzing semivolatile and nonvolatile hydrocarbons from soil samples**
Blain Gilbert*, Kim L. Pamplin, and Joshua M. Brokaw, Abilene Christian University, Abilene, TX
- 9:00 AM U 59 **Comparison of the infrared OH stretching spectra of 3-**

oxetanol, 3-cyclopenten-1-ol, and 2-indanol

Beverly Pappas*, Zachry Theis, and J.D. Lewis, Department of Chemistry, St. Edward's University, Austin, TX 78704

- 9:15 AM U 276 **Troubleshooting a gas chromatography assay for triclosan**
Elizabeth A. Fawcett* and Kiley P-H Miller, Scheiner University
- 9:30 AM U 40 **Reaction of 4-methoxybenzylmagnesium chloride with aldehydes**
Roy Espinosa*, Danette Vines, Schreiner University, Kerrville TX
- 9:45 AM U 96 **Lipid composition of whole body extracts of cochineal insect (*Dactylopius coccus*) and prickly pear cactus pads (*Opuntia phaeacantha*)**
Fabiola Corbette*, Jaidrian Porter*, and Michael Shipley, Midwestern State University, Wichita Falls, TX.

Chemistry and Biochemistry Oral Presentation Session II - WSB 307

- 10:45 AM U 149 **Rhodium B, a new application of fluorescence of the dye for environmental pollutants**
Stanislav Barskov and Mian Jiang
- 11:00 AM N S 212 **Visible light Photocatalytic water splitting using TiO₂ doped with Alkaline Metals**
Julio E. Valladares and Vianney Flores
- 11:15 AM N S 246 **Determinantial solution of the covariance matrix: Multivariate linear least squares equivalence**
Benny E. Arney, Jr.*, Sam Houston State University, Huntsville, TX

11:30 AM

Chemistry and Biochemistry Section Meeting

WSB 307

1:30 PM

View Chemistry and Biochemistry Posters

Pete P. Gallego Center

Chemistry and Biochemistry Posters

- U P31 **Fullerene dyads in bulk heterojunction organic photovoltaic devices**
Gustavo Hernandez*, Michael D. Irwin, The University of Texas at El Paso
- G P41 **Screening and formulation of selected sulfur compounds as antidotes in cyanide toxicity**
Siva Krishna Angulakurthi*, Madhuri Ancha, Michelle A. Smith, Mario A. Jane, Stephen A. Lee, Assumpta C. Nwaneri, Kristof Kovacs, Ilona Petrikovics
- N S P69 **Mineral deposition in a freshwater snail, *Planorbella trivolvis***
Francis R. Horne, Texas State University
- G P73 **Kinetic studies of beta-lactamase enzymes on beta-lactam type antibiotics and beta-lactamase inhibitors**
Chamari Wijesooriya*, Kristof Kovacs, Ilona Petrikovics, Sam Houston State University, Huntsville, TX

- U P13
4 **Novel Application of Fluorescence Based on Rhodamine B**
Stanislav Barskov and Mian Jiang
- U P18
1 **Methodology for the analysis of violin varnish**
Sovreyne Chadwick*, Robert Holloway, Schreiner University,
Schreiner University, Kerrville, TX
- G P20
1 **Cyanide analysis using its metabolite 2-aminothiazoline-4-
carboxylic acid (ATCA) with surface enhanced Raman
spectroscopy (SERS)**
Asish Parbatani*, Deepthika De Silva and David E. Thompson, Sam
Houston State University, Huntsville, Tx.
- G P20
2 **Developing robust figures of merit for spectroscopic
characterization of sphere masks for surface enhanced Raman
sensors**
Deepthika De Silva*, Antonio Carrillo, Thomas Miller, Kevin Eilers,
Lacey Ivie, Asish Parbatani, David E. Thompson, Sam Houston
State University, Huntsville, Texas
- U P20
3 **Isolation, characterization and purification of antiviral agents in
regular and single clove garlic**
Kimberlyn Garcia*, Wendy Ramirez*, Reihana Elsayed*, and
Hamida Qavi, Ph.D., University of Houston - Downtown
- U P22
7 **Photophysical properties of the redox dye Azure C using
Fluorescent Spectroscopy**
Trinh Nguyen*, Mian Jiang, University of Houston-
Downtown, Houston, TX
- U P26
0 **Determination of sulfur-containing compounds by carbon
based electrode incorporated with oxides**
Israel Sierra*, Jimmy Ngo, Mian Jiang, University of Houston-
Downtown, Houston, TX and Jun Lou, Rice University, Houston, TX
- U P27
4 **The solubility of rare earth hexacyanoferrate(III) compounds**
Chris Hughes*, Patrick Larsen, Richard L. Garner, Hardin-Simmons
University
- U P27
5 **The abstraction of diesel-like oils from algae**
Toni Cowan*, Jaxon Jordan, Gary Stanlake, Richard L. Garner,
Hardin-Simmons University

Conservation and Ecology Oral Presentations Session I - WSB 109

- 8:30 AM G 109 **Landowners and recreationists: Assessing attitudes toward
conservation and outdoor recreation**
Zack Thomas*, Tom Arsuffi, Texas Tech University, Llano River
Field Station, Junction, TX
- 8:45 AM G 118 **Differential corticosterone response towards native and
introduced predators by the San Marcos salamander, *Eurycea
nana***
Drew R. Davis* & Caitlin R. Gabor, Texas State University, San

- Marcos, TX.
- 9:00 AM G 153 **Characteristics of landscapes occupied by increasing and decreasing populations of scissor-tailed flycatchers (*Tyrannus forficatus*)**
Erin Feichtinger* and Joseph Veech
- 9:15 AM G 171 **Herpetological distribution of the Cerro El Potosí Galeana, Nuevo Leon, Mexico**
Jorge A. Contreras Lozano*, David Lazcano Villarreal and Armando J. Contreras Balderas, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León.
- 9:30 AM G 265 **Ectoparasite Diversity and Rickettsia Testing of Ectoparasites on Feral Swine (*Sus scrofa*) and Collared Peccaries (*Pecari tayacu*) in the Davis Mountains of Texas**
Kody Kubala, Department of Biology, Sul Ross State University Alpine, TX 79832 Christopher Ritzi, Department of Biology, Sul Ross State University Alpine, TX 79832
- 9:45 AM U 110 **Reproductive timing of *Eurycea naufragia* at two spring sites**
Kira McEntire*, Benjamin Pierce, Ashley Wall, Southwestern University, Georgetown, TX

Conservation and Ecology Oral Presentations Session II - WSB 109

- 10:45 AM U 136 **Predator recognition in the Barton Springs salamander, *Eurycea sosorum***
Dominic L. DeSantis*, Drew R. Davis, and Caitlin R. Gabor, Texas State University, San Marcos, TX
- 11:00 AM U 220 **Patterns of habitat use and competition between nine-banded armadillos (*Dasypus novemcinctus*) and hog-nosed skunks (*Conepatus leuconotus*)**
Katelynn J. Frei* and Robert C. Dowler
- 11:15 AM U 67 **A comparative survey of small mammal populations in four different microhabitats from 2002 to 2011**
Department of Biology, Abilene Christian University
- 11:30 AM N S 279 **Shoaling preferences between two sympatric livebearing fishes in Texas and their putative hybrids: the Endangered Pecos Gambusia (*Gambusia nobilis*) and the Largespring Gambusia (*Gambusia geiseri*)**
R. Deaton*, St. Edwards University, A. Ragan, J. Sanchez, R. Lewis, S. McCain, B. Boutwell, Sam Houston State University, G. Garrett, Texas Parks and Wildlife
- 11:45 AM **Conservation Ecology Section Meeting** **WSB 109**
- 1:30 PM **View Conservation Ecology Posters** **Pete P. Gallego Center**

Conservation and Ecology Posters

- U P8 **Identifying subspecies of *Phragmites australis* in the Coastal Bend of Texas**
Jasmine Jones*, Schreiner University, Kerrville, TX, David J. Grise, TAMU, Corpus Christi, TX, Ryan Reynolds, University of St.

- Thomas, Houston, TX, R. Deborah Overath, TAMU, Corpus Christi, TX
- G P94 **Present and future distribution of *Neotoma micropus* and *Neotoma albigula*, reservoirs of Chagas and leishmaniasis diseases, on the Mexico-Texas border**
T. Stephanie Romero, Teresa P. Feria, Robert K. Dearth, Brian L. Fredensborg
- U P10 **Monarch butterfly (*Danaus plexippus*) fall migration weight and wing load during an historic central Texas drought**
George C. Romfh*, Jason L. Locklin, Shannon K. Hill, Temple College, Temple, TX
- U P14 **Possible change in distribution of Elf Owl, *Micrathene whitneyi***
2 Zipporah M Sustaita*, Teresa P. Feria, and Timothy Brush
- U P14 **Wind turbine casued bat fatalities in two counties in Texas**
8 Patty Doyle*, Thomas E. Lee, Jr. Department of Biology, Box 27868, Abilene Christian University, Abilene TX 79699 and Joel G. Brant, Cassi Stapp Dept. of Biology McMurry University, McM Box 368, Abilene, TX 79697
- U P20 **Visual encounter surveys show limited movement of the Georgetown salamander (*Eurycea naufragia*)**
5 Ashley Wall*, Kira McEntire, Benjamin Pierce; Biology Department, Southwestern University, Georgetown, TX
- N P27 **Reproductive investment of two *Gambusia* congeners and their putative hybrids in west Texas**
8 R. Deaton*, St. Edward's University, J. Sanchez, R. Lewis, A. Ragan, Sam Houston State, Sam Hamontree, Texas State-San Marcos, M. Tobler, Oklahoma State University, and G. Garrett, Texas Parks and Wildlife
- N P28 **Mating behaviors of two sympatric livebearing congeners and their putative hybrids**
1 R. Deaton*, St. Edwards University, A. Ragan, J. Sanchez, R. Lewis, S. McCain, B. Boutwell, Sam Houston State University, G. Garrett, Texas Parks and Wildlife

Environmental Science Oral Presentations - WSB 206

- 8:30 AM G 86 **Effects of simulated microgravity on *Aspergillus nidulans* growth: Using high aspect ratio vessels**
Sharline R. Law*, Obaid Ullah, and Olufisayo Jejelowo, Texas Southern University, Houston, TX.
- 8:45 AM U 48 **Genetic characterization of putative arsenic-oxidizing bacteria isolated from the Lower Laguna Madre of Texas**
Thomas A. Eubanks*, Kristine L. Lowe, University of Texas - Pan American, Edinburg, TX and Eun-Hae Kim, Yan Bing Lin, Megan McEvoy, Christopher Rensing, University of Arizona, Tucson, AZ
- 9:00 AM U 76 **Nutrient and metal transport and fate in water, pore-water, sediments, and selected biota of the Laguna Madre, Texas**
Amanda J. Cavazos*, Frank J. Dirrigr, Jr., and Juan L. González,

		The University of Texas-Pan American, Edinburg, TX	
9:15 AM	U	114 Identification and quantification of DAAB bacterial consortium using fluorescence in situ hybridization (FISH)	
		Claudialina Duque*, Karen Little, and Christopher M. Ritzi, Sul Ross State University, Alpine, TX	
9:30 AM	U	199 Nutrient Removal of a Constructed Treatment Wetland in the Rio Grande Valley	
		Peter Cerda and Hudson DeYoe, Center for Subtropical Studies and Biology Dept, University of Texas-Pan American	
9:45 AM	U	208 Comparison of metabolic scope between the invasive <i>Gambusia geiseri</i> and endangered <i>G. nobilis</i>: potential importance of flow for endangered species management	
		Krystal Ramsey*, Kaitlen Gary, Chad Hargrave	
10:00 AM		Environmental Science Section Meeting	WSB 206
1:30 PM		View Environmental Science Posters	Pete P. Gallego Center

Environmental Science Posters

- U P21 **Behavioral Analysis of *Betta Splendens* exposed to Flutamide and Finasteride**
 Ana Noriega-Grajeda, Dr. Sara Tallarovic, Biology Professor, University of the Incarnate Word, San Antonio, Tx
- U P46 **Potential arsenic-reducing bacteria from the Laguna Madre display low phenotype diversity, but utilize a range of carbon sources and tolerate high concentrations of As(V)**
 Janet E. Ruiz*, Kristine L. Lowe, University of Texas - Pan American, Edinburg, TX
- U P47 **Arsenic-tolerant *Streptomyces* isolated from a hypersaline estuary, the Laguna Madre, in deep South Texas**
 Ramiro Garza*, Kristine L. Lowe, University of Texas - Pan American, Edinburg, TX
- U P68 **Phosphorus sorption in alluvial streambank sediments**
 Dedrick Hail*, Daniel Horton*, Carol Thompson, Tarleton State University, Stephenville, TX
- U P11 **Bioremediation of a tallgrass prairie revisited: Effects of remaining petroleum hydrocarbons**
 2 Isabel Lee*, Samantha Saldivar, Emily Adams, and Joshua M. Brokaw, Abilene Christian University, Abilene, TX
- U P16 **Enrichment of acetogenic and methanogenic bacteria for use in biogas production**
 3 Alejandro Ochoa* and James Masuoka, Midwestern State University, Wichita Falls, TX
- G P16 **Isolation of halophilic prokaryotes for degradation of polycyclic aromatic hydrocarbons**
 8 Nikhil Gaidhani* and James Masuoka, Midwestern State University, TX
- G P17 **The response of native oaks and invasive woody plant**

- 2 **species to drought stress in Cameron Park in Waco, Texas**
Skyler Toney* and Dr. Susan Bratton, Baylor University, Waco, TX
- G P24 **A survey of the microbial diversity from two distinct locations**
3 **within the Chihuahuan Desert Research Institute; a perpetual**
spring and a desert soil site
Laura Tang*, Jodi Carnes, Rachel Milan and Jackie Denson, Sul
Ross State University, Alpine, TX.
- U P26 **Analysis of Selenate Bioaccumulation and Toxicity in**
6 ***Chlamydomonas***
Jordan Jones, Chelsey Friedrichs, Aaron Luckevich, Charles
Hauser, St. Edward's University, Austin TX

Freshwater Science Oral Presentations Session I - WSB 209

- 8:30 AM U 100 **Effects of parasites on brood size in two closely related**
poeciliids with different reproductive strategies
Edwin Quintero*, Brian L Fredensborg, The University of Texas-Pan
American
- 8:45 AM U 190 **Thermal minimum and maximum for three species of temperate**
Gambusia
Nkenna Odom*, Kelbi Delaune, Chad Hargrave, Sam Houston State
University, Huntsville, TX
- 9:00 AM U 193 **Population dynamics, Food Web Structure and Potential**
Community-level interactions in a reconstructed desert
wetland, San Solomon Cienega, Balmorhea State Park, Texas
Ashley Sequeria*, Kelbi Delaune, Kaitlen Gary, Chad Hargrave,
Sam Houston State University, Huntsville, TX, and Gary Garrett,
Texas Parks and Wildlife, Kerrville, TX
- 9:15 AM U 17 **Streamlining techniques and improving efficiency for mass**
rearing the damselfly, *Ischnura ramburii* (Odonata:
Coenagrionidae), in the laborator
Joshua S. Huckabee*, Jason L. Locklin, Temple College, Temple,
TX and Eben J. Gering, University of Texas, Austin, TX
- 9:30 AM U 77 **The pink predicament: *Pomacea insularum* eggs fail to deter**
predation by red-eared sliders (*Trachemys scripta elegans*)
Allyson Plantz, Romi L. Burks, Department of Biology, Southwestern
University
- 9:45 AM N 155 **The Texas Water Symposium: Educating the public on complex**
S **water issues to improve environmental literacy using expert**
panels, rotating venues, partnerships and Texas Public Radio
T.L. Arsuffi*, Llano River Field Station, Texas Tech
University@Junction, Junction, TX, Christy Muse, Hill Country
Alliance, Austin, TX, Ernie Villareal, Texas Public Radio, San
Antonio, TX, Chris Distel, Schreiner University, Kerrville, TX

Freshwater Science Oral Presentations Session II - WSB 209

- 10:45 AM G 198 **Potential hybridization between endangered *Gambusia nobilis***
and invasive *G. geiseri* in a reconstructed desert wetland
Kelbi Delaune*, Chad Hargrave, Sam Houston State University,

- Huntsville, TX
- 11:00 AM G 284 **Role of Female Resistance in Sexual Conflict in three livebearing of the tribe Gambusiini**
Janalyn West*, Sam Houston State University, and Raelynn Deaton, St. Edward's University
- 11:15 AM N S 239 **Water quality of the Rio Grande from Brownsville, Texas to the tidal reach**
Joseph L. Kowalski* and Hudson R. DeYoe, Department of Biology and the Center for Subtropical Studies, The University of Texas - Pan American, Edinburg, TX and Carla Guthrie, Texas Water Development Board, Austin, TX.
- 11:30 AM N S 194 **Relative importance of local, regional and temporal drivers of community structure in streams of the Big Thicket National Preserve, TX**
Chad Hargrave*, Kaitlen Gary, Sam Houston State University, Huntsville, TX

11:45 PM **Freshwater Science Section Meeting**

WSB 209

1:30 PM **View Freshwater Science Posters**

Pete P. Gallego Center

Freshwater Science Posters

- U P15 **Investigating gregarine parasitism in the damselfly, *Argia moesta* (Odonata: Coenagrionidae): Do host populations associated with lentic systems have greater parasite prevalences and intensities?**
Rodney Duckett* and Jason L. Locklin, Temple College, Temple, TX.
- G P19 **Preliminary taxonomic results of a completed survey of stream inhabiting insects in the chihuahuan desert of west texas**
Sanjeev Mahabir* and Roy C. Vogtsberger Department of Biology, Midwestern State University, Wichita Falls, TX
- U P10 **Freshwater fish population specification: Insights into bridging the gap between theoretical studies and field practices**
Joseph Falade* and Dale B. McDonald, Midwestern State University
- U P11 **Probably not snail eating plants: Enriched macrophyte N¹⁵ values in a stable isotope study of *Pomacea insularum*'s trophic interactions**
Tracy V. Day* & Romi L. Burks, Southwestern University, Georgetown, TX
- N S P15 **Taxonomic, zoogeographical and ecological study of freshwater fishes from the upper río Nazas, Durango, México**
Hiram Herrera-Barquin, Ma de L. Lozano-Vilano and Ma E. García-Ramírez, Laboratorio de Ictiología, Departamento de Vertebrados, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León
- U P14 **Microscopic buffet: Estimates of meiofauna availability for the Georgetown salamander in two permanent springs**
Jonathan O. Miley*, Allyson K. Plantz, Tracy V. Day, Romi L. Burks, Southwestern University, Georgetown, TX

- U P24 **Frail snails: Effect of pH on the growth and survival rate in juvenile apple snails *Pomacea insularum***
Kevin Burge* and Romi L. Burks, Southwestern University, Georgetown, Texas
- G P28 **Current distribution of the largespring *Gambusia geiseri*, in Texas**
J. West, J. Sanchez, R. Lewis, C. Kroll, Sam Houston State, G. Garrett, Texas Parks and Wildlife, N. Allan, US Fish and Wildlife, E. Marsh-Matthews, University of Oklahoma, and R. Deaton, St. Edward's University
- G P28 **Post-parturition females cannibalism at high rates but do not discriminate against their own young**
S. Hamontree*, Texas State-San Marcos, L. Brown, S. Holguin, Sam Houston State University, S. Stoops, Texas A&M, Z. Schertz, R. Deaton, St. Edward's University
- U P28 **Effects of competitor size ratio on male mating and competition in the western mosquitofish, *Gambusia affinis***
T. Voong*, St. Edward's University, C. Kroll, J. Sanchez, Sam Houston State University, and R. Deaton, St. Edward's University
- N P28 **Status of the endangered Pecos gambusia and Comanche Springs pupfish in Phantom Lake Spring, west Texas**
R. Deaton*, St. Edwards University, R. Lewis, J. West, C. Kroll, Sam Houston State University, S. Stoops, Texas A&M, G. Garrett, TPWD, and N. Allan, US Fish and Wildlife
- G P28 **Reproductive assessment across six isolated populations of the largespring gambusia, *Gambusia geiseri*.**
J. West*, J. Reeves, Sam Houston State University, R. Martin, S. Stoops, Texas A&M, and R. Deaton, St. Edward's University
- U P28 **Interbrood Interval and Mean Brood Mass as a Function of Stored Sperm in the Livebearing Western Mosquitofish, *Gambusia affinis***
G. Kroh, R. Deaton, St. Edward's University, E. Marsh-Matthews, University of Oklahoma
- U P78 **Putting on Mussel: Interactions between the Asian Golden Mussel (*Limnoperna fortunei*) and Native Ampullariid Snails**
Katie Gibson*, Allyson L. Plantz, Clementina Clavo and Romi L. Burks, Animal Behavior Program, Southwestern University, Georgetown, TX

Geosciences Oral Presentations Session I - WSB 101

- 8:30 AM U 219 **Additions to the middle Eocene WU-26 fauna from the Uinta Basin in northeastern Utah**
Kayla Scates* 1, Nick Brandes 1, Dee Gadt 2, Jeffrey Westgate 1, and James Westgate 1; 1 Earth and Space Sciences, Lamar University, Texas University System; 2 Criminal Justice, Texas State University
- 8:45 AM G 137 **A primitive Hadrosauroid (Dinosauria: Ornithischia) from the Cretaceous Woodbine Formation at the Arlington Archosaur Site, North Texas**

- Derek J. Main*, Christopher R. Scotese and Christopher R. Noto
- 9:00 AM U 196 **Issues with museum specimen identifications: Discriminant function analysis of mandibular first molar measurements for two cryptic rodent taxa, *Gerbilliscus leucogaster* and *G. brantsii***
 Timothy L. Campbell* Department of Anthropology, Texas A&M University, Patrick J. Lewis and Monte L. Thies, Sam Houston State University
- 9:15 AM U 62 **Identifying meteorites by energy dispersive x-ray fluorescence (XRF)**
 Katelyn Lehman*, R.G. Mayne, A. J. Ehlmann, School of Geology, Energy and the Environment, Texas Christian University, Fort Worth, Texas
- 9:30 AM U 209 **Thin Section Analysis of Sheared and Brecciated Rocks in the Southern Burro Mountains, NM: Implications for Tectonic History**
 Theda Strickler*, Chris A. Barker, and LaRell Nielson, Stephen F. Austin State University, Nacogdoches, TX, and Manetta Dillingham, Consultant
- 9:45 AM U 7 **Chemical composition of organic matter in surface sediments of the Eel River shelf depocenter**
 Stephanie D. Smith, Miguel Goni, Jeff Borgeld, Rob Wheatcroft

Geosciences Oral Presentations Session II - WSB 101

- 10:45 AM U 57 **Subsidence history of SE Texas based on GPS resurveying of bench marks**
 Christine M. Gartner, Joshua A. McBride, Jasma J. Thompson, Lauren Dugat and Joseph M. Kruger
- 11:00 AM U 97 **Fecal source determination within the Concho River System, San Angelo, Tom Green Conty, TX**
 Andrew Timmermann*, Jarrett Louder, James Word, Angelo State University, San Angelo, TX
- 11:15 AM N S 175 **Epikarst development of Karrens on the Marble Falls Limestone, Pedernales Falls State Park, Texas 76972**
 R. LaRell Nielson* and Chris A. Barker, Stephen F. Austin State University, Nacogdoches, Texas 75692
- 11:30 AM N S 61 **New sequence of polyphase Laramide and younger folding recognized throughout Big Bend region**
 Joseph I. Satterfield*, Angelo State University, San Angelo, TX, Jonathan E. Dyess, University of Minnesota Duluth, Duluth, MN, Chris A. Barker and LaRell Nielson, Stephen F. Austin State University, Nacogdoches, TX

11:45 AM **Geosciences Section Meeting**

WSB 101

1:30 PM **View Geosciences Posters**

Pete P. Gallego Center

Geosciences Posters

- G P24 **Enviromental Preferences of the Cretaceous turtles of the San Juan Basin, New Mexico**
*Asher Lichtig, Sul Ross State University, New Mexico Museum of Natual History
- U P58 **Folds and sills south and east of Dagger Mountain, Big Bend National Park and Black Gap Wildlife Management Area**
Nathan K. Knox* and Joseph I. Satterfield, Angelo State University, Henry F. Schreiner III, University of Texas at Austin
- U P10 **Detailed mapping of Mariscal Mountain anticline, Big Bend National Park**
5
M. Justin Cartwright*, Trent R. Bieberly, Joseph I. Satterfield, Angelo State University, San Angelo, TX, and Daniel P. Miggins, U.S. Geological Survey, Denver, CO
- U P13 **Microbial activity on fossils: A threat to repositories?**
9
Randolph G. De La Garza*, Todd P. Primm, and Patrick J. Lewis, Sam Houston State University, TX.
- G P26 **Maximum discharge estimates for Terlingua Creek at the Highway 170 bridge, Terlingua, Texas**
9
Taylor Bruecher, Jonas Ball, Lauren Royter and Kevin Urbanczyk

Marine Science

10:00
AM

View Marine Science Posters - see list at end of section

Pete P. Gallego Center

Marine Science Oral Presentations - WSB 209

- 2:30 PM G 262 **To catch as catch can: Using otoliths to determine age of red snapper for use in developing effective management in Texas waters**
Nicole Carrillo, Texas A&M at Galveston
- 2:45 PM G 225 **Establishing a monofilament recycling and recovery program (MRRP) in Texas coastal counties**
Jessica DiGiulio*, Tom Linton and Wes Highfield, Texas A&M University at Galveston, Galveston, TX.
- 3:00 PM U 70 **Suitability of trematodes in snails as indicators of coastal bay health in South Texas**
Mayra Rangel*, Brian L Fredensborg, The University of Texas-Pan American, Edinburg, TX
- 3:15 PM U 101 **Are highly specialized parasites limited to only one host?**
Rebecca Hernandez*, Brian L Fredensborg, The University of Texas-Pan American
- 3:30 PM N S 244 **Tracing nitrogen from the Arroyo Colorado into the Lower Laguna Madre**
Hudson DeYoe*1 and Warren Pulich2 , 1Center for Subtropical Studies and Biology Dept at University of Texas-Pan American, Edinburg, TX, 2River Systems Institute, Texas State University, San Marcos, TX

Marine Science Posters

- U P99 **Nitrogen leaching from a wind-tidal flat cyanobacterial mat community**
Tyler Murray* and Hudson DeYoe, Biology Dept and Center for Subtropical Studies, University of Texas-Pan American, Edinburg, TX
- N S P10 **Comparison of macrofauna in *Halodule wrightii* and *Thalassia testudinum* in Lower Laguna Madre, TX**
Natali Mejia, Joseph L Kowalski, Hudson DeYoe, Brian L Fredensborg*, The University of Texas-Pan American
- G P14 **The spatial and temporal distribution of drifting macroalgae of Emmord's Seagrass Meadow in the Laguna Madre**
Veronica Thompson and Dr. Roy Lehman, Texas A&M University - Corpus Christi
- U P20 **Fate of seagrass gaps- Influence of gap size**
John N. Garcia*, Danielle Garza, Joseph Kowalski, and Hudson DeYoe, Center for Subtropical Studies and Biology Dept, University of Texas-Pan American
- U P23 **Potential competitive interactions between the seagrass *Thalassia testudinum* and the rhizophytic alga *Penicillus capitatus* in the Laguna Madre of Texas: Year two**
Danielle R. Garza*, The International Baccalaureate Program at Lamar Academy, McAllen I.S.D., McAllen, Texas, Hudson R. DeYoe, Department of Biology and the Center for Subtropical Studies, The University of Texas-Pan American, Edinburg, Texas, and Joseph
- U P23 **Primary productivity in the Lower Laguna Madre and Arroyo Colorado, Texas**
Marco Ramos III*, The International Baccalaureate Program at Lamar Academy, McAllen I.S.D., McAllen, Texas, Hudson R. DeYoe, Department of Biology and the Center for Subtropical Studies, The University of Texas-Pan American, Edinburg, Texas, and Joseph L
- U P28 **Arsenic as a stressor of the seagrass *Thalassia testudinum***
Marlon Duran, Michael Persans and Hudson DeYoe

Mathematics Oral Presentations - WSB 107

- 2:30 PM N S 9 **Cassini's Identity**
Elsie M. Campbell*, Angelo State University, and Dionne T. Bailey*, Angelo State University, jointly
- 2:45 PM G 192 **Picard's iterative scheme for initial value problems**
Judith Loya and Lloyd Moyo
- 3:00 PM N 200 **Evaluation of the generalized Fresnel's integrals**

S

Dr. Lloyd Moyo, Sul Ross State University

3:15 PM

Mathematics Section Meeting

WSB 107

Neuroscience Oral Presentations Session I - WSB 201

- 8:30 AM U 128 **Age-dependent differential effects of neurotoxin exposure on associative learning in *Caenorhabditis elegans***
Wendy Flores*, Linda Armstrong, Emily Hazen, Dr. Fidelma O'Leary, St. Edwards University Dept. of Biological Sciences
- 8:45 AM U 121 **Examination of the effects of imidacloprid on the acquisition and retention of associative memory in *Caenorhabditis elegans***
Emily Hazen*, Fidelma O'Leary, St. Edward's University, Austin TX
- 9:00 AM U 119 **Heritability of a learning deficit induced in *C. elegans* by Exposure to the Neurotoxin Imidacloprid**
Linda Armstrong*, Wendy Flores, Fidelma O'Leary
- 9:15 AM U 184 **Assessing the impact of amyloid- β peptide on associative learning in a transgenic *Caenorhabditis elegans* model of Alzheimer's disease**
Anne Busch*, Jennie Cassady, Fidelma O'leary
- 9:30 AM U 267 **Possible protein interaction between maspardin and ALDH18A1 in Mast syndrome**
Mary A. Mason*, Michael C. Hanna, Texas A&M University-Commerce, Commerce, TX.
- 9:45 AM U 20 **Fungicide exposure alters sexual behavior in adult male rats**
Briana Cobos, St. Edward's University
- 10:00 AM **View Neuroscience Posters - see list at end of section** Pete P. Gallego Center
- 11:45 AM **Neuroscience Section Meeting** WSB 201

Neuroscience Special Presentation 10:45 - 11:45

- 10:45 AM **Cellular mechanisms of Alzheimer's disease** WSB 201

Neuroscience Special Presentation 2:30-3:30 pm

- 2:30 PM **Neurometabolic mechanisms for memory enhancement and neuroprotection** WSB 201

Neuroscience Posters

- U P13 **Examination of the ability of nicotine to enhance memory function and alleviate learning deficits induced by Amyloid- β plaques in a *C. elegans* model of Alzheimer's disease**
Jennifer Cassady*, Annie Busch, Fidelma O'Leary, St. Edward's University, Austin, TX
- G P14 **Maspardin effects on BMP signaling molecules**

7

Lauren E. Bailey*, Michael C. Hanna, Ph.D., Texas A&M University
- Commerce, Commerce, TX.

U P16
7 **Neurological dysfunction associated with pyrethroid exposure**

Katherine Najera, Beth Pelsler*, Fidelma O'Leary, St. Edward's
University, Austin, TX

G P17
0 **Social affiliation and sex status regulate emotional and
energetic components of energy balance in Syrian hamsters**

Bryan L. Clossen¹, John L. Shannonhouse¹, Ross E. Hairgrove²,
Daniel C. York³, Benjamin Li An Fong², Gregory W. Hercules², B.
Walker², Lauren M. Mertesdorf⁴, Margi Patel², and Caurnel
Morgan^{1,2,3}. ¹Texas A&M Institute for Neuroscience, Texas A&M
Universit

G P18
9 **Plasmalemmal repair of transected neurites of murine B104
cells requires PKC η and θ , and PKA**

Aleksej Zuzek*, Jerry D. Fan, Christopher S. Spaeth, George D.
Bittner, University of Texas at Austin, Austin, TX

G P22
6 **Antidepressant drug treatment at puberty induces sex-
dependent emotional instability and hyper-stimulation of GABA
currents in the nucleus accumbens of female hamsters**

John Shannonhouse*, Dustin Dubois, Annette Fincher, Chad
Chalker, Morgan Henry, Paul Wellman, Alejandra Vela, Gerald Frye,
Caurnel Morgan, Texas A&M University, College Station, Texas

U P26
3 **Investigation of KIF5A-masparidin interaction: Potential link
among Hereditary Spastic Paraplegias**

Brookins, S.D., Hanna, M.C.

Physics Oral Presentations - WSB 305

8:30 AM U 35 **Harvesting energy at Midwestern State University**
Abhishek Chatterjee, M. Salim Azzouz, Midwestern State University,
Wichita Falls, TX

8:45 AM U 18 **Analysis of electron diffraction in crystallography**
William Ware, Robert Nicholas Lanning, Spencer Wigginton, Bryan
Neal, Cristian Bahrim, Department of Physics, Lamar University, TX
77710-10046

9:00 AM G 217 **Status of the LUX dark matter search experiment**
LUX Collaboration

9:15 AM G 197 **Modeling leucophores in the skin of cephalopods**
Meng Gao* and George W. Kattawar, Texas A&M University

9:30 AM G 250 **Numerical study of chromatophore in the skin of cephalopods**
Dayou Chen, Meng Gao, Angela R. Marotta and George W.
Kattawar

9:45 AM Physics Section Meeting

WSB 305

10:00 AM View Physics Posters

Pete P. Gallego Center

Physics Posters

- U P55 **Development of an image library of abell clusters in search of supernovae**
James Boshart*, Courtney Geiger*, Tarleton State University, Stephenville, TX.
- U P17
7 **Asteroid detection using Tarleton's .8m research telescope**
Jordan Hernandez*, Court Sullivan, Jake Rhodes, James Boshart, Courtney Geiger, Dr. Mike Hibbs, Tarleton State University, Stephenville, TX

Science Education Oral Presentations Session I - WSB 305

- 10:45 AM N S 14 **Electronic professional development**
Barbara ten Brink, Ph.D., Austin ISD
- 11:00 AM G 264 **Link Science & Math to Improve Middle School Student Performance**
Alysha Kinsel*, Sandra West, Texas State University, San Marcos, TX
- 11:15 AM U 141 **Staying SMARt: Assesment of a one-on-one inquiry model to teach the scientific method to elementary school students**
Meredith Liebl*, Kate Roberts, Suzy Pukys and Romi Burks, Southwestern University, Georgetown, TX 78626
- 11:30 AM G 214 **Adapting the paper time roll technique for teaching the diversity of Life in conjunction with deep geologic time in geology, paleontology, and biology courses**
Robert W. Burroughs*, Travis Z. Wicks, Julia A. Clarke, Jackson School of Geosciences, The University of Texas at Austin
- 10:00 AM **View Science Education Posters - see list at end of section** **Pete P. Gallego Center**

Science Education Oral Presentations Session II - WSB 305

- 2:30 PM N S 122 **A new four-year cohort model for research in an undergraduate curriculum**
Chris Distel, Schreiner University, Kerrville, TX
- 2:45 PM N S 3 **International Astronomical Search Collaboration: A student discovery program in astronomy**
Patrick Miller, Hardin-Simmons University
- 3:00 PM N S 207 **Elliptical Fourier analysis of closed contours: Implementation and and application**
Benny E. Arney, Jr*, Sam Houston State University, Huntsville, TX and Irisa D. Arney, New Mexico State University, Las Cruces, NM
- 3:15 PM **Science Education Section Meeting** **WSB 305**

Science Education Posters

- N
S P12 **Relative contributions of faculty, undergraduates, and graduate students to forming a community supportive of undergraduate research experience**
Susan Power Bratton, Baylor University, Waco, TX
- G P21 **Building bridges in our region: Texas Karst Outreach and Research Program at Stephen F. Austin State University**
Melinda G. Shaw*, Kevin W. Stafford, Stephen F. Austin State University

Systematics and Evolutionary Biology Oral Presentations Session I - WSB 210

- 10:45 AM G 103 **Mitochondrial, morphological, and karyotypic data confirm the presence of multiple lineages of *Mus* in Botswana**
Molly M. McDonough*, Cibele G. Sotero-Caio, Robert J. Baker, Department of Biological Sciences, Texas Tech University, Lubbock, TX and Patrick J. Lewis, Monte L. Thies, Department of Biology, Sam Houston State University, Huntsville, TX and Matlhgonolo Ts
- 11:00 AM G 191 **Morphological and Molecular Variation in Townsend's big-eared Bat (*Corynorhinus townsendii*) in West Texas**
T. Marie Tipps* and Loren K. Ammerman
- 11:15 AM N
S 16 **Additions to the parasitoids and inquilines of *Trypoxylon manni* (Hymenoptera: Crabronidae) in Trinidad, West Indies**
Allan Hook, St. Edward's University, Austin, TX
- 11:30 AM U 229 **Got anything to eat? Prey modification and its impact on frequency dependent selection in assassin bugs**
Julia Potocnjak* and Dr. Christopher Vitek The University of Texas-Pan American
- 1:30 PM **View Systematics and Evolutionary Biology Posters - see list at end of section** Pete P. Gallego Center

Systematics and Evolutionary Biology Oral Presentations Session II - WSB 210

- 2:30 PM G 71 **A morphological comparison of the land snails *Holospira monclovana* and *Holospira picta* (Gastropoda: Urocoptidae) from northern Mexico using X-ray computed tomography**
Rigel R. Rilling*, Ned E. Strenth, Angelo State University, San Angelo, TX and Alfonso Correa-Sandoval, Instituto Tecnológico de Cd. Victoria, Cd. Victoria, Tamaulipas, Mexico
- 2:45 PM G 261 **Description and phylogenetic utility of the forelimb of *Angistorhinus* (Phytosauria)**
Michelle R. Stocker, The University of Texas at Austin, Austin, TX; Kelsey Hornung, The University of Texas at Austin, Austin, TX
- 3:00 PM G 277 **Potential ancient hybridization and mitochondrial capture in hybridizing ground squirrels (genus *Spermophilus*)**
Cody W. Thompson*, Texas Tech University, Lubbock, TX, Frederick B. Stangl, Jr., Midwestern State University, Wichita Falls, TX, and Robert D. Bradley, Texas Tech University, Lubbock, TX.

3:15 PM

Systematics and Evolutionary Biology Section Meeting

WSB 210

Systematics and Evolutionary Biology Posters

- U P80 **Evolutionary potential of rare plant species: *Mentzelia mollis* and *M. packardiae* (Loasaceae)**

Blain Gilbert*, Emily Sparks, Isabel Lee, and Joshua M. Brokaw, Abilene Christian University, Abilene, TX

- N P81 **Morphological and molecular diagnostic characters for *Mentzelia monoensis* (Loasaceae)**

Levi Gates and Joshua M. Brokaw*, Abilene Christian University, Abilene, TX

- U P24
1 **Molecular systematics of the Ophiuroidea using 16S rDNA**

Shannon Rose*, Rebecca Hunter, Abilene Christian University

Terrestrial Ecology and Management Oral Presentation Session I - WSB

111

- 8:30 AM G 259 **The dark side of birding: Perceptions of bird watching impacts**

Lisa J. Reznicek, Texas A&M University at Galveston

- 8:45 AM G 146 **Nest defense by Carolina Wrens (*Thryothorus ludovicianus*) in natural and urban environments**

Ashley Bogrand*, Diane L. H. Neudorf, Sam Houston State University

- 9:00 AM U 32 **Experimental test of the function of Rock Wren nest pavement using artificial nests**

Ivy G. Sustaita* and Andrew C. Kasner, Wayland Baptist University, Plainview, TX.

- 9:15 AM G 133 **Characterization of the abiotic niche of the American hog-nosed Skunk (*Conepatus leuconotus*) using ecological niche modeling: Past and present viewpoints**

Adam W. Ferguson*, Richard E. Strauss, Texas Tech University, Lubbock, TX and A. Townsend Peterson, University of Kansas, Lawrence, KS.

- 9:30 AM U 38 **Effectiveness of scent stations, game cameras, and scent types for assessing mammalian presence and abundance in an urban environment**

Corin M. Olivas* and Andrew C. Kasner, Wayland Baptist University, Plainview, TX

- 9:45 AM G 36 **Temporal niche partitioning in forest-dwelling bats**

Anica Debelica-Lee*, Yuanyuan Guo, Kenneth T. Wilkins, Baylor University, TX.

- 10:00 AM **View Terrestrial Ecology and Management Posters - see list at end of section**

Pete P. Gallego Center

Terrestrial Ecology and Management Oral Presentation Session II - WSB

111

- 10:45 AM N S 95 **Habitat preferences of the dengue virus vectors *Aedes aegypti* and *Aedes albopictus*: People, mosquitoes, and dengue risk**
Christopher Vitek*, University of Texas Pan American, Edinburg, TX
- 11:00 AM G 245 ***Anopheles quadrimaculatus* in South Texas**
Norma Hermelinda Martinez*, Christopher John Vitek , University of Texas-Pan American, Edinburg, TX
- 11:15 AM U 74 ***Lutzomyia diabolica* and Leishmaniasis: A potential threat to human health**
Miroslava Garza*, Ana L. Cavazos*, Teresa P Feria, University of Texas Pan-American, Edinburg, TX.
- 11:30 AM G 270 **A survey of Ectoparasites of Small Mammals from Honduras**
Lizbeth Marquez and Christopher Ritzi
- 11:45 AM G 211 **Index of biological integrity of the birds (Bibi) comparing the structure between the east and west orientation of the Cerro El Potosi, Galeana, Nuevo Lón, México, natural protected area**
Blanca Lizeth Gaspar Rodríguez*, Armando Jesús Contreras Balderas, Juan Antonio García Salas, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León.
- 12:00 PM N S 130 **Where in the world is *Wedelia*? Global distribution patterns of Texas native plants including presumptive endemics**
Richard Patrock, Brackenridge Field Laboratories, University of Texas at Austin

Terrestrial Ecology and Management Oral Presentation Session III - WSB111

- 2:30 PM G 248 **Arthropod Ecology of Carrion Resources in the Trans-Pecos Region of Texas**
Melinda K. Dooley* & Christopher M. Ritzi, Sul Ross State University, Alpine, TX
- 2:45 PM N S 120 **The impact of saltcedar biological control along the Rio Grande on a non-target species, *Tamarisk aphylla***
Anne Marie Hilscher* and Christopher M. Ritzi (Sul Ross State University Biology Dept)
- 3:00 PM G 272 **Survey of vertebrate communities in invasive saltcedar (*Tamarix*, spp.), monocultures in Presidio County, Texas**
Karin L. Nilsen*, and Christopher M. Ritzi, Department of Biology, Sul Ross State University
- 3:15 PM N S 98 **Demographics and natural history of *Kinosternon flavescens* in Jeff Davis County, Texas**
Travis J. LaDuc and James L. Christiansen, Texas Natural History Collections, The University of Texas at Austin
- 3:30 PM G 104 **Recent reptile fossils from the Pindai Caves of New Caledonia**
Alicia M. Kennedy, The University of Texas at Austin
- 3:45 AM Terrestrial Ecology and Management Section Meeting**

WSB 111

Terrestrial Ecology and Management Posters

- G P10 **eBird and management: Assessing the application of large scale data and data collection strategies for local management use**
Thomas Riddle, Texas A&M University at Galveston
- U P11
7 **A Survey of Ectoparasites of Small Mammals from Guatemala**
Joel Natividad* and Christopher M. Ritzi, Sul Ross State University, Alpine, TX.
- U P16
0 **Mammals of selected areas in east central Tamaulipas, Mexico**
Jimena Echegollen-Correa Nieto, Armando J. Contreras-Balderas* and Juan A. Garcia-Salas. Laboratorio de Ornitología, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León. Apartado Postal 425. San Nicolas de los Garza, Nuevo León, Mexico 664
- U P18
5 **A Look At The Mexican Spotted Owl in the Davis Mountains of Texas**
David P. Rumbelow advised by Dr. Chris Ritzi and Dr. Steven Platt
- U P21
8 **Avifauna of two plant communities in Marin, Nuevo León , México**
Hugo González-Páez, Juan A. Garcia-Salas* and Armando J. Contreras-Balderas. Laboratorio de Ornitología, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León. Apartado Postal 425. San Nicolas de los Garza, Nuevo León, Mexico. 66450
- U P23
1 **Mammals of the Monumento Natural Cerro de La Silla, Nuevo León, México**
Mercedes A. Salinas-Camarena, Armando J. Contreras-Balderas*, Juan A. García-Salas and David A. Borré-González. Laboratorio de Ornitología, Facultad de Ciencias Biológicas, Universidad Autónoma de Nuevo León. Apartado Postal 425. San Nicolas de los Garza
- U P23
4 **Bird distribution of Sierra La Silla, Nuevo Leon, Mexico; a GIS projection**
David A. Borré-González, Juan A. Garcia-Salas*, Armando J. Contreras-Balderas, Mercedes A. Salinas-Camarena and Alejandro Garza-Sánchez. Facultad de Ciencias Biológicas, Laboratorio de Ornitología, Universidad Autónoma de Nuevo León. Apartado Postal 425.

4:00 PM

Section Chairs Meeting

WSB 101

4:45 PM

2012 TAS Outstanding Texas Educator and Texas Distinguished Scientists presentations

Marshall Auditorium