

Spring 2014

Clemson Biological Sciences 6th Annual Student Symposium

Clemson University

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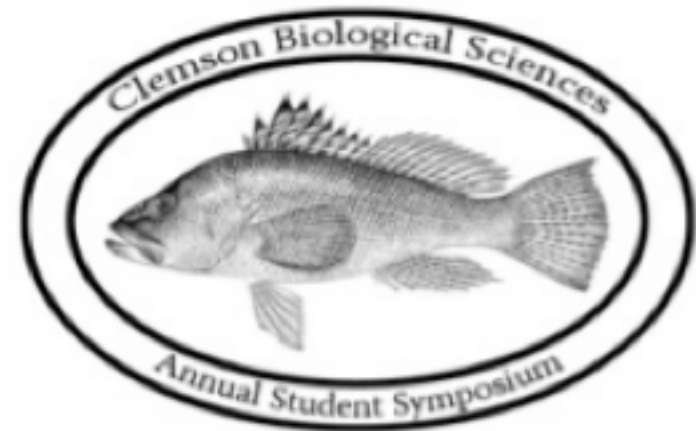
Jimmy John's

Christie Sampson



BSGSA Presents:

Clemson Biological Sciences 6th
Annual Student Symposium



Saturday, February 22nd, 2014
Vickery Auditorium
Life Science Atrium
Clemson University

TALKS

- 9:00 Welcome!
- 9:10 **Namrata Sangupta** - Effects of Diet and Toxicants on Starvation Survival, Reproduction and Allocation of Polar Lipids in *Daphnia magna* (PhD, Entox, Dr. Baldwin)
- 9:17 **Gandura Omar Abagandura** - Influence of a Nonionic Surfactant on Soil Water Content and Cotton Growth in a Sandy Loam Soil (PhD, SAFES, Dr. Park)
- 9:24 **Sarah Au** - Impacts of Microplastics on the Biological Function of *Hyalella azteca* (PhD, BioSci, Dr. Klaine)
- 9:31 **Michael Carlo** - Keeping Pace with Climate Change: a Physiological and Transcriptomic Approach to Thermal Performance Curves (PhD, BioSci, Dr. Sears)
- 9:38 **Vratika Chaudhary** - Prevalence of Rabies virus, CDV and Parvovirus in feral dogs and meso-carnivores in Kanha Tiger Reserve, India (MS, BioSci, Dr. Tonkyn)
- 9:45 **Kelly Diamond** - How Water Velocity Affects Predator Prey Interactions in Hawaiian Steams (MS, BioSci, Dr. Blob)
- 9:52 **Jacquelyn Evans** - Investigation of DLA Alleles in Breeds with Exocrine Pancreatic Insufficiency (PhD, Genetics/Biochem, Dr. Clark)
- 9:59 **Holland Hendrick** - *Entamoeba histolytica*: The Role of Translation in Stress (MS, BioSci, Dr. Temesvari)
- 10:06 **Brennen Jenkins** - Extracellular DNA is Important for Stabilization of *Legionella pneumophila* Biofilms (MS, Micro, Dr. McNealy)
- 10:13 **Katherine Johnson** - The chronic toxicity of chloride, sulfate and bicarbonate to *Ceriodaphnia dubia* (MS, Entox, Dr. Klaine)
- 10:20 **Katie Keck** - Loss of Foundation Tree Species: Consequences for Small Mammal Assemblages in Forest Ecosystems (MS, WFB, Dr. McFadden)
- 10:30 **BREAK**
(Fruit, Bagels and Donuts and Coffee and Tea are provided)
- 10:50 **Christopher Mareyl** - The Functional Significance of the Fused Pelvis to the Plastron in Pleurodiran Turtles (PhD, BioSci, Dr. Blob)
- 10:57 **Anna Lee McLeod** - The Effects of Anthropogenic Contaminants on Fathead Minnow Anxiety Behavior (MS, Entox, Dr. Klaine)
- 11:04 **Daniel Pederson** - Inhibition of *Vibrio cholerae* Biofilm Formation by Cranberry Extracts (MS, BioSci, Dr. Cao)
- 11:11 **Suellen Pometto** - Reassembly of the Butterfly Proboscis and the Role of Saliva (MS, Entomology, Dr. Morse & Dr. Adler)
- 11:18 **Eric Riddell** - Implications of Geographic Variation of Water Loss Rate within a Lungless Salamander on the Capacity to Respond to Climate Change (PhD, BioSci, Dr. Sears)
- 11:25 **Caitlin Rinz** - Congenital Myasthenic Syndrome in a Labrador Retrieve Family (PhD, Genetics/Biochem, Dr. Clark)
- 11:32 **Nicolette Roach** - Marsh Madness: Assessing the Vulnerability of Coastal Marsh Birds to Sea Level Rise in South Carolina (MS, SAFES & WFB, Dr. Barrett)
- 11:39 **Christie Sampson** - Conserving The Land Giants (PhD, BioSci, Dr. Tonkyn)
- 11:46 **Alanna Slack** - Golden Lion Tamarin (*Leontopithecus rosalia*) Food-offering Calls.) (MS, SAFES, Dr. Rapaport)
- 12:53 **Lauren Sweet** - The Development of a Model to Predict the Adverse Effects of SSRI Antidepressants on Fish Brain Chemistry and Predatory Behavior (PhD, Entox, Dr. Klaine)
- 12:00 **Andrew Warner** - Variable Depth "On-The-Go" Peanut Digger Chapter One: Phase One Design and Development (SAFES, Dr. Kirk)
- 12:07 **Nathan Weaver** - The Long-term Effects of Exurbanization on Low Order Streams and Stream Salamanders of the Southeastern Appalachian Mountains (MS, Forestry & NR, Dr. Barrett)
- 12:14 **Austin Wray** - From Wastewater Treatment to Exposure: Mimicking Nanoparticle Transformations to Assess Changes to Accumulation Patterns in a Simple Aquatic Food Chain (PhD, Entox, Dr. Klaine)
- 12:21 **Vanessa Young** - *In vivo* Femoral Strains on Swimming Turtles: Influence of Locomotor Medium on Limb Bone Structure (PhD, BioSci, Dr. Blob)

Posters (1:30 - 3:00)

1. **Clemson iGEM** - Universal Self-Amplifying Biosensor for Rapid, Specific Detection of Pathogens (UG, Micro, Dr. Tzeng)
2. **Gandura Abagandura** - Libyan Agriculture: Challenges and Future (PhD, SAFES, Dr. Park)
3. **Joseph Angeloni** - Effects of Cranberry on the Lifespan of *Caenorhabditis elegans* in the Presence of Pathogenic Bacteria (MS, Micro, Dr. M. Cao)
4. **Evan Apanovitch** - Rising Stress: Investigating *Plethodon* stressors Across Elevation Changes (PhD, BioSc, Dr. Sears)
5. **David Buckley** - Developing Methods for Recovering and Disinfecting Human Noroviruses from Carpets(MS, Micro, Dr. Jiang)
6. **Nattasha Vinas** - Finding and Measuring Growth Related Transcripts in Marine Bacteria(MS, Microbiology, Dr. Campbell)
7. **Amanda Carter, Damielle Herring** - Adaptive Mating Strategies in Online Dating (UG, BioSc, Dr. Rapaport)
8. **Zhao Chen** - Developing a Two-Step Heat Treatment for Inactivating Desiccation-Adapted *Salmonella* in Aged Chicken Litter (PhD, BioSci., Dr. Xiuping Jiang)
9. **Tyler Collins** - Assessing the Role of Melanocortin 4 Receptors in Diversification of Poeciliid Fishes (MS, BioSc, Dr. Ptacek)
10. **Jason Coral** - Fate and Behavior of Photoactive Titanium Dioxide Nanoparticles in Aquatic Ecosystems (PhD, Entox, Dr. Steve Klaine)
11. **Grant Davidson** - The Effect of Social Environment on the Development of Sailfin Mollies (*P. latipinna*) (UG, BioSc, Dr. Ptacek)
12. **Holly Garrett** - Geospatial Mapping and Proposed Diversion Channel and Pond Placement for the South Carolina Botanical Gardens (PhD, Plant and Environmental Sciences, Dr. Dara Park)
13. **Amber Hackler** - Probing the Effects of TbHK2 on *Trypanosoma brucei* Growth, Social Behavior and Inhibitory Response (UG, Genetics/Biochem, Dr. J Morris)
14. **S.K. Hart** - Weather Extremes and Phenological Changes of the Shores of Lake Issaqueena, SC (UG, SAFES, Dr. Mikhailova)
15. **Sarah Hoffman** - It's Not Easy Being a Reef: The Impacts of Corralivory and Competition on Live Coral Cover (UG, BioSc, Dr. Childress)
16. **Kathleen Jwanowski** - Determining the Activity of *Legionella pneumophila* Gold Response Operon (lpg2105-2108) (MS, Micro, Dr. McNealy)
17. **Abigail Lawson** - Habitat Influence on South Carolina American Alligator Densities Derived from Nightlight Survey Data (1971-2013) (PhD, WFB, Dr. McFadden)
18. **Katerina Lay** - Analysis of Shikimate Accumulation and EPSPS Gene Copy Number in *Amaranthus palmeri* Populations of Varying Glyphosate Resistance (UG, Genetics/Biochem, Dr. Lawton-Rauh)
19. **David Limbaugh** - Gene Expression in *Legionella* Biofilms (UG, Micro, Dr. McNealy)
20. **Jui Tung 'Ray' Liu** - Arsenic Inhibits Hedgehog Signaling During P19 Cell Differentiation (PhD, BioSc, Dr. Bain)
21. **Amith Maroli** - Glyphosate Application Causes Physiological Perturbations in Amino Acids Profile in *Palmer amaranth*- A Study of Susceptible and Resistant varieties of *Palmer amaranthus* (PhD, SAFES, Dr. Tharayil)
22. **Chris McCoy** - Arsenic Targets Neural Plate Border Specifier Cells in P19 cells (MS, BioSc, Dr. Bain)
23. **Snehal Mhatre** - Water for Electricity in the Upper Savannah Basin: Impacts on Freshwater Mussels (PhD, SAFES, Dr. Johnson)
24. **Kim Newton** - Evaluating Acute Cadmium and Zinc Metal Mixture Toxicity to *Daphnia Magna* (PhD, BioSc, Dr. Klaine)
25. **Charles Pellett** - Enhanced Gleization for Biological Pond Liners (MS, SAFES, Dr. Zehnder)
26. **C.M. Pilgrim** - Land use changes in the Lake Issaqueena watershed, South Carolina (UG, SAFES, Dr. Mikhailova)
27. **Lauren Perino & Porsha Reed** - Disney's portrayal of gender roles and evolutionary mate-choice selection (UG, BioSc, Dr. Rapaport)
28. **Brandt Quirk-Royal** - Just keep grazing: the effects of parrotfish species grazing behavior on coral cover (UG, BioSc, Dr. Childress)
29. **Alyssa Shearer** - Repair of DNA damage by Microbial DNA Glycosylases (UG, Genetics/Biochem, Dr. W. Cao)

30. **Marco Valera** - Quantifying Transcript Expression of *N. profundicola* (MS, Dr. Barbara Campbell, Biological Sciences)
31. **Rachel Weber** - Fecal Source Tracking in Little Eastatoe Creek (UG, Micro, Dr. Campbell)
32. **Dhansuka Wijesinghe** - Soil Erosion in South and Southeast Asia: A Review (PhD, SAFES, Dr. Park)
33. **Dhansuka Wijesinghe & Kathryn Drennan** - Soil Temperature And Moisture Differentials From Concrete Sidewalks (Various, SAFES, Dr. Park)
34. **D. Wijesinghe, A. Pellett, H. Garrett, G. Abagandura, W. Chapman, A. Cole** - Soil Loss Estimation in the Natural Heritage Trail in the South Carolina Botanical Garden (Various, SAFES, Dr. Park)
35. **H. Yun** - Adaptation of Soil Judging to Northeast China (UG, SAFES, Dr. Mikhailova)
36. **Emily O'Connor & Taylor Burgess** - Modeling population structure and adaptation in a Hawaiian stream goby: *Sicyopterus stimpsoni* (UG, BioSci, Dr. Childress)
37. **Julianna Ellis & Katie Cunningham** - Do spiny lobsters prefer to associate with familiar individuals? (UG, BioSci, Dr. Childress)