

ESA Annual Meetings Online Program

Culture-independent approach for endosymbiotic bacterial systematics in Pentatomidae

Wednesday, November 16, 2011

Exhibit Hall 3, First Floor (Reno-Sparks Convention Center)

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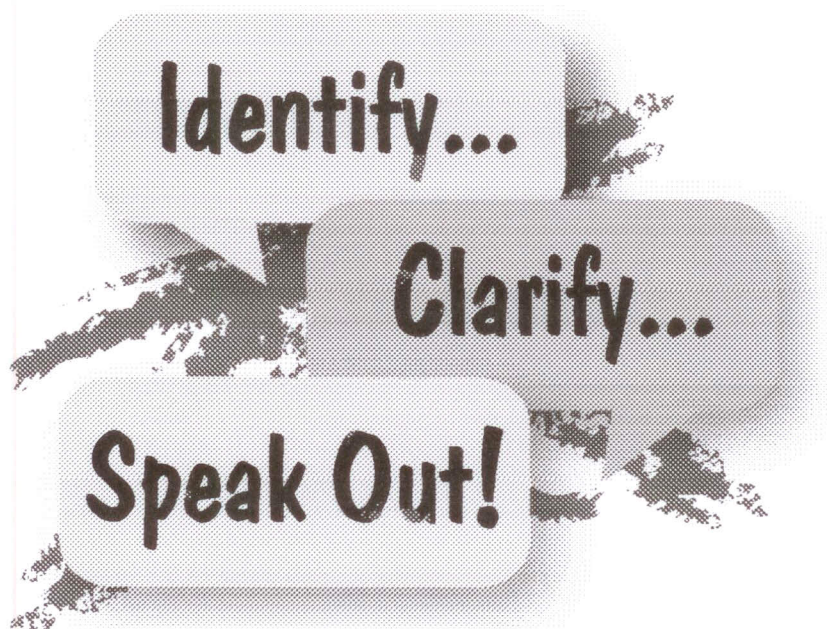
In the last decade, stink bugs have been aim of extensive studies to elucidate the microbiota mainly associated within an important portion of their midgut, the gastric caecum. Great bacterial diversity has been found in this region from diverse stink bugs species and in some cases, the symbionts play an important role on the insect fitness. However, most of these symbionts are yet unculturable. Thus, we surveyed six species of pentatomid stink bugs - *Pellaea stictica*, *Loxa deducta*, *Thyanta perditor*, *Piezodorus guildinii*, *Dichelops melacanthus* and *Edessa mediatubunda* (Hemiptera: Pentomidae) - using a culture-independent approach for a better understanding of the evolutionary relationship between the insects and their symbionts. All clones belong to Enterobacteriaceae family and although several RFLP pattern were found from each stink bugs species, they were usually clustered together. Exception was found for symbionts from *T. perditor* which were scattered along several phyletic branches. Furthermore, some clones formed new phyletic groups and at least for *L. deducta*, *Pe. sticta* and *T. perditor*, our data suggests a coevolutionary association with their caeca-symbionts. Finally, on the basis of molecular and phylogenetic data we proposed 3 Candidatus.

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the *Odonotophotopsis melicausa* species-group. **David A. Tanner**, david.tanner@unt.edu¹ and James P. Pitts², ¹Univ. of North Texas at Dallas, Dallas, TX, ²Utah State Univ., Logan, UT

D0554 The genome of the egg-parasitoid wasp *Trissolcus basalus* (Wollaston) (Hymenoptera: Platygasteridae). **Norman F. Johnson**, johnson.2@osu.edu¹, Joseph Cora², Elijah Talamas¹, Alejandro A. Valerio¹, Andrew D. Austin², Hans Klompen¹ and Ferdinando Bin³, ¹The Ohio State Univ., Columbus, OH, ²Univ. of Adelaide, Adelaide, Australia, ³Univ. of Perugia, Perugia, Italy

D0555 The armilla group of genera of egg parasitoids in the family Platygasteridae (Hymenoptera). **Luciana Musetti**, musetti.2@osu.edu¹, Norman F. Johnson¹ and Lubomir Masner², ¹The Ohio State Univ., Columbus, OH, ²Agriculture and Agri-Food Canada, Ottawa, ON, Canada

D0556 Intersex production in the *Wolbachia*-infected parasitoid wasp, *Trichogramma kaykai*. **Genet M. Tulgetske**, genet.tulgetske@ucr.edu and Richard Stouthamer, Univ. of California, Riverside, Riverside, CA

D0557 Studies on the structure and pathogens of *Aethina tumida*, the small hive beetle. **Natasha A. Wright**, nawright@uark.edu and Donald C. Steinkraus, Univ. of Arkansas, Fayetteville, AR

D0558 Scanning electron microscopic studies on the tongue of *Apis* species. **Neelima R. Kumar**, neelmark6@gmail.com, Kalpana Nayyar and Ruchi Sharma, Panjab Univ., Chandigarh, Chandigarh, India

D0559 A comprehensive inventory of lignocellulolytic enzymes in the wood-feeding cockroach *Cryptocercus punctulatus*. **Xuguo "Joe" Zhou**, xuguozhou@uky.edu¹, Xiangrui Li¹, Scott Geib², Christine A. Nalepa³ and Ling Yuan¹, ¹Univ. of Kentucky, Lexington, KY, ²USDA - ARS, Hilo, HI, ³Raleigh, NC

D0560 Culture-independent approach for endosymbiotic bacterial systematics in Pentatomidae. **Simone Prado**, ssprado@msn.com⁴, Tiago Zucchi¹, Antônio R. Panizzi² and Fernando Luis Cònsoli³, ¹Costa Lima Quarantine Laboratory, Embrapa Environment, Jaguariuna, São Paulo, Brazil ²Embrapa Trigo, Passo Fundo, RS, Brazil, ³ESALQ-USP, Piracicaba, São Paulo, Brazil⁴,

D0561 Exploring termite's behavior at a tunnel intersection: directional selection and the intersection passing time. **Sook Jung Ku**, sjku0123@hotmail.com¹ and Sang-Hee Lee², ¹Kangwon National Univ., Chuncheon, Kangwon, South Korea, ²National Institute for Mathematical Sciences, Daejeon, Chungnam, South Korea

D0562 Interactions between the Arctic mosquito (*Aedes nigripes*) and predaceous diving beetles (*Colymbetes dolabratus*) in snowmelt ponds near Kangerlussuaq, Greenland. **Lauren E. Culler**, Lauren.E.Culler@dartmouth.edu, Dartmouth College, Hanover, NH

D0563 Water loss rates and desiccation mortality relate to circadian rhythms for two species of burying beetle. **W. Wyatt Hoback**, hobackww@unk.edu, Stephanie Butler, Jeremiah Carlson, Jessica Jurzenski, Jess Lammers and Matheus Parenti, Univ. of Nebraska - Kearney, Kearney, NE

D0564 Stream invertebrate community trends and environmental correlates at Ozark National Scenic Riverways, Missouri, 2005-2010. **David E. Bowles**, david_bowles@nps.gov, J. Tyler Cribbs, Jan A. Hinsey and Jessica A. Lurras, US National Park Service, Republic, MO

D0565 Aquatic insect assemblages of ephemeral ponds in the Apalachicola National Forest, Florida. **Andrew K. Rasmussen**,

andrew.rasmussen@famu.edu, Barton A. Richard and James L. Richardson, Florida A&M Univ., Tallahassee, FL

D0566 Comparison of leaf litter and wood dwelling ant communities in southern Guyana. **Joseph Bradley Wright**, jwrigh16@students.towson.edu, Towson Univ., Towson, MD

D0567 A study of ant diversity in burned versus unburned sandplain forest in Vermont. **Emily Ogilvy**, eogilvy@smcvt.edu and Valerie S. Banschbach, Saint Michael's College, Colchester, VT

D0568 Patterns of diversity in high-elevation grassland Diptera. **Alyssa MacLeod**, alyssa.macleod@mail.mcgill.ca and Terry A. Wheeler, McGill Univ., Ste Anne de Bellevue, QC, Canada

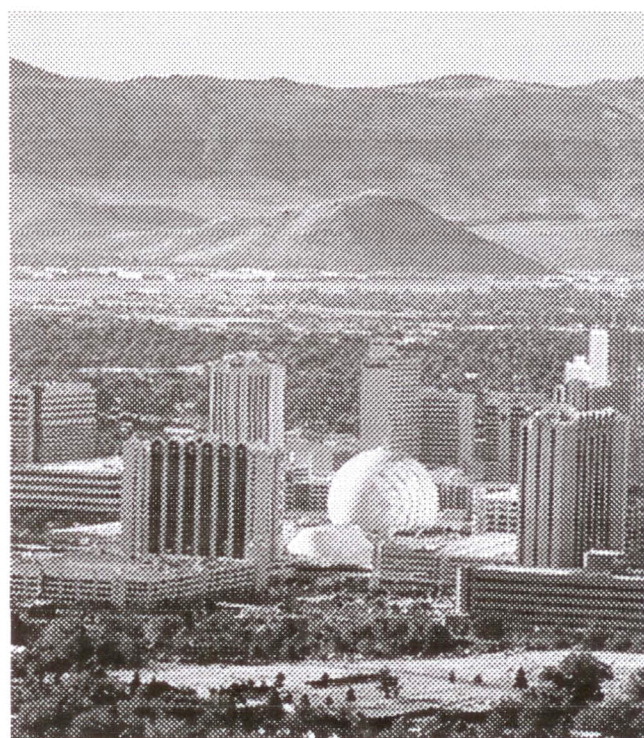
D0569 Invertnet: a new platform for biodiversity research. **Christopher H. Dietrich**, dietrich@inhs.illinois.edu¹, Nahil Sobh² and Omar Sobh², ¹Illinois Natural History Survey, Champaign, IL, ²Univ. of Illinois, Urbana, IL

D0570 Evolution of flies: those without ptilina are like birds without beaks. **Lloyd Knutson**, lvnkntson@tiscali.it¹ and Rory J. Mc Donnell², ¹Salita degli Albito 29, 04024 Gaeta (LT), Italy, ²Univ. of California, Riverside, CA

D0571 Ecological speciation in the holly leaf-miner, *Phytomyza glabricola* (Diptera: Agromyzidae). **Julie Byrd Hébert**, julie.b.hebert@gmail.com¹, Sonja J. Scheffer² and David J. Hawthorne¹, ¹Univ. of Maryland, College Park, MD, ²USDA, Systematic Entomology Laboratory (SEL), Beltsville, MD

D0572 Monitoring techniques for *Pseudacteon litoralis* (Diptera: Phoridae) in Alabama. **Kelly Ridley**, ridleka@auburn.edu and LC. "Fudd" Graham, Auburn Univ., Auburn, AL

D0573 Study of a non-flammable liquid as an insect preservative. **Amy K. Miller**, Amy.Miller@fda.hhs.gov, Monica Pava-Ripoll, Rachel E. Goeriz Pearson and George Ziobro, US Food and Drug Administration (FDA), College Park, MD



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