Final Program

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The authors of this schedule thank those who have gone before us. We thank them for their heroic efforts in putting together programs in the past that have helped us greatly to do our job.

ACKNOWLEDGEMENTS

Believe it or not, we have enjoyed the task of organizing the 2001 evolution meetings in beautiful Knoxville, even though one of us was "volunteered" to do so and used the same trick on the other to share the burden. But hey, this is the "volunteer" state, so perhaps that was fitting...

It has been a wonderful learning experience, made possible not only by the people thanked below, but by several others who organized previous editions and were happy to share their experiences, thoughts and suggestions. We will be more than happy to do the same with next year's organizers. Please, notice that these are the first evolution meetings at which computer projection is available for all sessions, something we are particularly proud of.

A special thanks is due to Heather McNeal, of UT Conferences, for her high professionalism and good humor throughout this process (during which she managed to get married and still be exceedingly helpful to us). We are also deeply grateful to Courtney Murren for putting together the program in a painstaking fashion. If anybody is unhappy with the details, consider that she spent weeks trying to make everybody happy, despite our advice that a couple of disgruntled people were worth her mental sanity...

We sincerely hope you will enjoy your stay in Knoxville and that you will find here food for your thoughts and your stomachs, as well as time to enjoy the beautiful surroundings.

-- *Massimo Pigliucci and Mitchell Cruzan*

Our additional thanks to:

Pat Cox, Chris Boake and Sergey Gavrilets – for suggestions on the program.
Sandy Echternacht – for taking care of the symposia.
Susan Riechert – for organizing the field trips and excursions.
Stan Guffey – for making sure the audio visuals will break down the least number of times.
Randy Small – for coordinating the army of grad students who will help things run smoothly.
Lou Gross – for organizing outreach and entertainment.
Ed Lickey and Tad Fukami – for recruiting other graduate students and designing the logo.
Foster Levy – for taking the best care of our exhibitors and sponsors.
Gary McCracken – for tasting the banquet food (and he gets thanks for that?).
Gordon Burghardt – for organizing the picnic and making sure there will be plenty of beer.

EXHIBITORS AND BOOK PUBLISHERS

The Exhibit Show will be in Exhibit Hall 2 of the Knoxville Convention/Exhibition Center throughout the conference, along with the poster presentations. The Exhibit Show will be set up on Tuesday, June 26 and will open at 8am on Wednesday morning, June 27. Exhibit Show hours will be:

Wednesday, June 27	8:00 a.m. – 12:00 p.m. and 1:30 p.m. – 5:30 p.m.
Thursday, June 28	8:00 a.m. – 12:00 p.m. and 1:30 p.m. – 5:30 p.m.
Friday, June 29	8:00 a.m. – 12:00 p.m. and 1:30 p.m. – 5:30 p.m.
Saturday, June 30	8:00 a.m. – 12:00 p.m.

The following list represents exhibitors who are planning to attend this event at the time this program was published, along with a brief description of their products and services if available.

Academic Press – Academic Press is the largest publisher of scientific books and journals in North America, offering titles in the life, biomedical, physical, social, and behavioral sciences.

Blackwell Science – Publisher of scientific books and journals, including the journal *Evolution and Development*. Stop by their booth for a sample copy of one of their journals.

Classification Society of North America – A non-profit interdisciplinary organization whose purposes are to promote the scientific study of classification and clustering (including systematic methods of creating classifications from data), and to disseminate scientific and educational information related to its fields of interest. The CSNA is a member of the Internation Federation of Classification Societies (IFCS). (website: http://www.pitt.edu/~csna). The exhibit will contain information about the society, sample copies of the latest issue of our journal (The Journal of Classification), sample CDs containing a bibliography on classification, and information about membership.

Dragonfly Glass – Your favorite insecta in stained and fused glass. Portable and affordable.

Harvard University Press – New books from Harvard University Press include: "Promiscuity: An Evolutionary History of Sperm Competition" by Tim Birkhead; "On Fertile Ground: A Natural History of Human Reproduction" by Peter Ellison; "Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution," edited by Frans de Waal; and "The Misunderstood Gene," by Michel Morange. New books in paperback include "The Genetic Gods," by John Avise; and "The Second Creation: Dolly and the Age of Biological Control," by Ian Wilmut, Keith Campbell, and Colin Tudge.

Johns Hopkins University Press – The Johns Hopkins University Press is proud to exhibit new and recent titles in evolution and the life sciences at Evolution 2001. This year, we are featuring "Phenotypic Plasticity: Beyond Nature and Nurture" by Massimo Pigliucci. Please see our program ad and visit our exhibit. Telephone: 1-800-537-JHUP. Address: 2715 N. Charles St., Baltimore, MD 21218.

Missouri Botanical Garden Press – Publisher of two botanical journals, a diverse Monograph series, full-color, elephant-folio series on orchids and regional and national floras, including those of China, Mesoamerica, and the Venezuelan Guayana.

National Science Foundation – Program officers from Ecological and Evolutionary Physiology (Jack Hayes), Population Biology (Libby Lyons and Sam Scheiner), and Systematics (Jim Rodman) will be available to meet with scientists and students. Handouts and displays will highlight current activities and new programs. The NSF officers encourage you to stop by.

Oxford University Press – Schluter's *Evolution of Adaptive Radiation*, Levin's *The Origin, Expansion, and Demise of Plant Species*, and Schilthuizen's, *Files, Frogs, and Dandelions*, and many other fine titles. Forthcoming later this year: Mayr and Diamond, *The Birds of Northern Melanesia*, and Hamilton, *Narrow Roads of Gene Land,* Volume 2.

Prentice Hall – Prentice Hall welcomes you to the 2001 Evolution Meeting. Please stop by our booth to receive a copy of the new *Evolutionary Analysis 2e* written by Scott Freeman and Jon Herron. Prentice Hall is also proud to introduce *Biological Science,* Prentice Hall's new major's general biology text by Scott Freeman coming in December.

Princteon University Press – Princeton University Press publishes major work in evolution, ecology, and behavior. New titles include Denny and Gaines's CHANCE IN BIOLOGY, Hubbell's UNIFIED NEUTRAL THEORY OF BIOGEOGRAPHY AND BIODIVERSITY, Camazine et al's SELF-ORGANIZATION IN BIOLOGICAL SYSTEMS, and Bonner's FIRST SIGNALS.

Sinauer Associates – Our display will include: Hall's *Phylogenetic Trees Made Easy: A How-To Manual for Molecular Biologists*, Schlichting and Pigliucci's *Phenotypic Evolution: A Reaction Norm Perspective*; Maddison and Maddison's *MacClade 4*; *Gotelli's A Primer of Evology*, Third Edition; Caswell's *Matrix Population Models*, Second Edition; Bertise, Gaines, and Hay's *Marine Community Ecology*; and more!

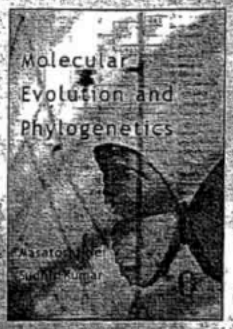
Smithsonian Institution Press – The Smithsonian Institution Press is a division of the Smithsonian Institution. It publishes in numerous fields, principally natural history, mammalogy, herpetology, conservation biology, and evolution.

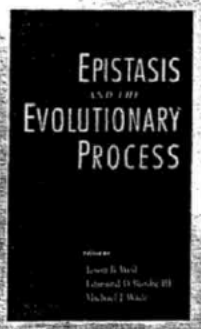
Taylor and Francis Publishing Group – Taylor and Francis, Inc. is proud to publish *Systematic Biology*, the Official Journal of the Society of Systematic Biologists. Stop by our booth during the meeting or visit our website anytime to learn more about our Books and Journals programs: www.taylorandfrancis.com

University of Chicago Press – a publisher of many scholarly books.

Whatdidyoubringme - Http:whatdidyoubringme.homestead.com Hundreds of scientifically accurate natural history gifts. Sales support K-12 education using gardens as a science lab.

Please visit these exhibitors and book publishers in Exhibit Hall 2 throughout the conference.





The Ecology of Adaptive Radiation

DOLPH SCHLUTER

This book evaluates the causes of adaptive radiation. It focuses on the "ecological" theory of adaptive radiation, a body of ideas that began with Darwin and were developed through the early part of the 20th century. The text re-evaluates the ecological theory, along with its most significant extensions and challenges, in the light of all the recent evidence. It is the first full exploration of the causes of adaptive radiation in decades.

(Oxford Series in Ecology and Evolution)
2000 296 pp. 72 line illus.
paper $34.95/ cloth $70.00

Genes, Categories, and Species

The Evolutionary and Cognitive Cause of the Species Problem

JODY HEY

This book is a thorough re-examination of the "species problem", the continuing disagreement among biologists about how best to identify species and what constitutes useful and genuine biological divisions of groups and organisms. The book explores the reality of biological diversity and of the mental processes behind the ways we recognize species, and how we establish typological categories generally. The text develops a theory of evolutionary groups (groups of DNAs that compete and share in genetic drift and adaptation), and revisits the major issues of modern phylogeny, systematics, and evolutionary biology through this framework.

June 2001 240 pp. 8 line illus.
$45.00

The Origin, Expansion, and Demise of Plant Species

DONALD A. LEVIN

A thoughtful and original reassessment of our understanding of plant speciation and extinction, by one of the leading workers on plant evolution. It provides a new synthesis of evolutionary biology and ecology and examines species from their origins, then follows them through their expansion, differentiation and loss of cohesion, decline and extinction. The stages in the lives of species are viewed through ecological and genetic theory and topics typically addressed independently are woven into a continuous fabric.

(Oxford Series in Ecology and Evolution)
2000 240 pp. 37 b/w line illus.
paper $35.00/ cloth $70.00

Molecular Evolution and Phylogenetics

MASATOSHI NEI and SUDHIR KUMAR

Along with developing technology in the field of molecular evolution, the application of the new statistical and computational methods has become more complicated and there is no comprehensive volume that treats these methods in depth. This book fills this gap and presents various statistical methods that are easily accessible to general biologists as well as biochemists, bioinformatists and graduate students and covers measurement of sequence divergence, construction of phylogenetic trees, statistical tests for detection of positive Darwinian selection, inference of ancestral amino acid sequences, construction of linearized trees, and analysis of allele frequency data. Emphasis is given to practical methods of data analysis, and methods can be learned by working through numerical examples using the computer program MEGA2 that is provided.

2000 352 pp. 74 line illus.
paper $50.00/ cloth $90.00

The Birds of Northern Melanesia

Speciation, Ecology, and Biogeography

ERNST MAYR and JARED M. DIAMOND

Ernst Mayr is one of the principal architects of the "neo-Darwinian synthesis," which has been the dominant perspective in 20th century evolutionary biology. Jared Diamond is one of the most wide-ranging minds in biology, and winner of the Pulitzer Prize for "Guns, Germs, and Steel." Mayr and Diamond decided in 1970 to collaborate on an authoritative monograph presenting their data and interpretations of the evolution of the birds of the Solomon and Bismark Islands. This is an outstanding case study of these birds' evolutionary history covering ecological attributes, origins, taxonomy, dispersal, abundance, and distributions of 195 birds on 76 islands.

September 2001 560 pp. 140 illus. & 9 color plates $55.00

Epistasis and the Evolutionary Process

JASON B. WOLF, EDMUND D. BRODIE, III, and MICHAEL J. WADE

"I learned a great deal from [this book], and I congratulate the editors on an excellent choice of authors. The volume does not attempt to resolve the 70-year old controversy about the importance of epistasis and shifting balance. Instead, it shows that epistasis plays a central role in a much wider and more interesting variety of evolutionary problems than seemed possible even ten years ago. — *Science*"

2000 344 pp. 75 line illus.
$85.00

Parasites and the Behavior of Animals

JANICE MOORE

This volume presents ecological consequences and evolutionary mechanisms that may be associated with behavioral alterations in parasitized hosts. It summarizes the literature in this area, showing that reports of alteration may frequently be consistent with more than one evolutionary explanation and that rigorous tests are needed before the phenomenon can be understood and placed in a predictive framework.

(Oxford Series in Ecology and Evolution)
June 2001 304 pp. 46 line illus. & 16 halftones
paper $45.00/ cloth $85.00

Meat-Eating and Human Evolution

CRAIG B. STANFORD and HENRY T. BUNN

Edited by RUSSELL L. CIOCHON and BERNARD A. WOOD

When, why, and how early humans began to eat meat are three of the most fundamental unresolved questions in the study of human origins. This book takes a novel and strongly interdisciplinary approach to the role of meat in the early hominid diet, inviting well-known researchers who study the human fossil record, modern hunter-gatherers, and nonhuman primates to contribute chapters to a volume that integrates these three perspectives. There is currently no other book, nor has there ever been, that occupies the niche this book will create.

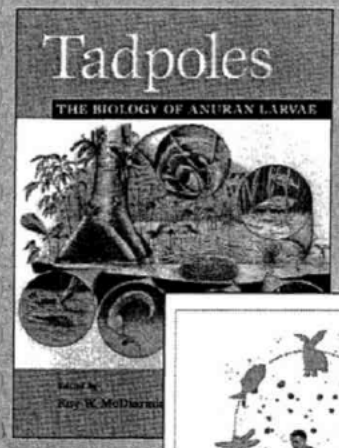
(Human Evolution Series)
March 2001 384 pp. 5 halftones 67 line illus.
$70.00

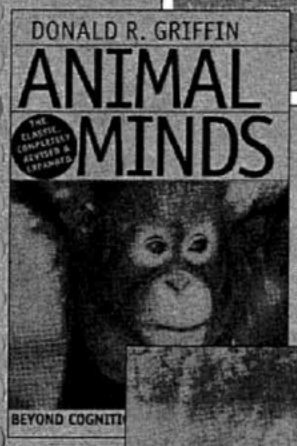
OXFORD

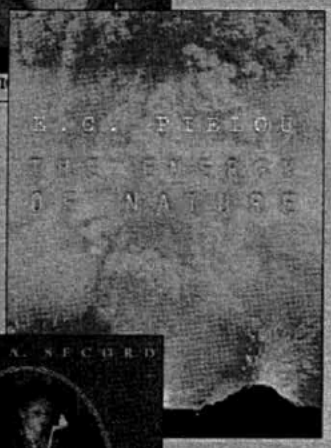
Prices are subject to change and apply only in the US. To order or for more information, please call 1-800-451-7556. In Canada, call 1-800-387-8020. Visit our website at www.oup-usa.org

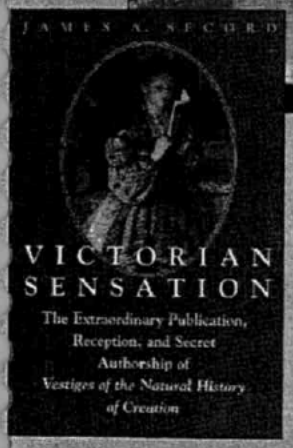
evolution - *new from chicago*

Visit our booth for a 20% discount on these and related titles.









Parasitism
The Ecology and Evolution of Intimate Interactions
Claude Combes
Translated by Isaure de Buron and Vincent A. Connors
With a new Foreword by Daniel Simberloff
Interspecific Interactions
552 pages 145 line drawings, 51 halftones
Cloth $55.00

Animal Ecology
Charles Elton
With new introductory material by Mathew A. Leibold and J. Timothy Wootton
296 pages 8 halftones, 13 line drawings
Paper $18.00

Animal Minds
Beyond Cognition to Consciousness
Donald R. Griffin
376 pages
Cloth $27.50

The Energy of Nature
E. C. Pielou
256 pages 76 line drawings
Cloth $25.00

Now in Paper
Tadpoles
The Biology of Anuran Larvae
Edited by Roy W. McDiarmid and Ronald Altig
458 pages 118 halftones, 181 line drawings, 23 tables
Paper $40.00

Life Underground
The Biology of Subterranean Rodents
Edited by Eileen A. Lacey, James L. Patton, and Guy N. Cameron
462 pages 43 line drawings, 31 tables
Paper $24.00

Forthcoming Fall 2001
The Life of a Virus
Tobacco Mosaic Virus as an Experimental Model, 1930–1965
Angela N. H. Creager
336 p., 30 halftones, 31 line drawings, 3 tables
$25.00

Forthcoming Fall 2001
Rise of the Dragon
Readings from Nature on the Chinese Fossil Record
Edited by Henry Gee
256 p., 30 halftones, 42 line drawings, 24 tables
$27.00

Evolutionary Patterns
Growth, Form, and Tempo in the Fossil Record
Edited by Jeremy B. C. Jackson, Scott Lidgard, and Frank K. McKinney
344 pages 54 halftones, 62 line drawings
Paper $30.00

Rock of Ages, Sands of Time
Paintings by Barbara Page
Text by Warren Allmon
With a Foreword by Rosamond Wolff Purcell
300 pages, 272 color pages
Cloth $45.00

Victorian Sensation
The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation
James A. Secord
624 pages 155 halftones
Cloth $35.00

Of the Plurality of Worlds
A facsimile of the first edition of 1853; plus previously unpublished material excised by the author just before the book went to press; and Whewell's dialogue rebutting his critics, reprinted from the second edition
William Whewell
Edited and with new introductory material by Michael Ruse
408 pages 1 halftone
Paper $20.00

Reconciling Science and Religion
The Debate in Early-Twentieth-Century Britain
Peter J. Bowler
Science and Its Conceptual Foundations series
476 p., 11 halftones, 5 line drawings
Cloth $40.00

Shaping Science with Rhetoric
The Cases of Dobzhansky, Schrödinger, and Wilson
Leah Ceccarelli
192 pages 1 line drawing, 2 tables
Paper $20.00

Forthcoming Fall 2001
The Nature of Diversity
A Voyage through Space and Time
Daniel R. Brooks and Deborah A. McLennan

The University of Chicago Press
1427 East 60th Street, Chicago, IL 60637 www.press.uchicago.edu

WELCOME TO KNOXVILLE

Nestled in the foothills of the Great Smoky Mountains, Knoxville is the largest city in East Tennessee and offers visitors a delightful combination of natural beauty, charm, and southern hospitality.

Located in the geographical center of the eastern United States, Knoxville is within a day's drive of half the US population. Approximately one hour from Knoxville, the Great Smoky Mountains National Park is a half-million acre botanical treasure, containing more varieties of trees than all of Europe and an abundance of streams, wildlife, trails, and spectacular scenery. Oak Ridge, a major center for research and development, is located 23 miles to the northwest. The Oak Ridge National Laboratory, established in 1942, covers a wide scope of research activities including genetics, fusion, energy conservation, nuclear safety, advanced materials, global climate change, advanced computer and basic sciences.

Knoxville is also home to The University of Tennessee. Founded in 1794, the University was the nation's first co-ed higher education institution. More than 20,000 undergraduates and 6,000 graduate students representing almost every state in the union and more than 90 foreign countries attend UT's Knoxville campus. The University of Tennessee is proud of it's graduates, which include 2 Nobel Laureates, 7 Rhodes Scholars, 6 Pulitzer Prize winners, and 10 Astronauts.

The University of Tennessee and UT Conferences is proud to host this most prestigious event, and wish each of you a very enjoyable stay in Knoxville and a thoroughly enriching conference.

GENERAL CONFERENCE INFORMATION

This section contains general information about the event. Please read this section carefully as it will assist you with many questions.

Meals

Breakfast is included in your registration fee. It will be a limited continental breakfast served in Exhibit Hall #1 in the Knoxville Convention/Exhibition Center on Wednesday, June 27 – Saturday, June 30 from 6:30a.m. – 8:30a.m. each day.

Daily lunches were available for purchase in an optional meal plan on the Event Registration Form. Participation in this lunch plan was strongly encouraged, as there are only a limited number of restaurants within walking distance of the Conference Site that serve lunch. There may be a very limited number of tickets for lunches available for sale at the Information desk during the event. If you purchased the Lunch Meal Plan, those meals will be served Wednesday, June 27 – Saturday, June 30 from 11:45a.m. – 1:15p.m. in Exhibit Hall #1 of the Knoxville Convention/Exhibition Center.

Dinners are 'on your own,' with the exception of Thursday night and Saturday night. The conference picnic is on Thursday evening for all participants, and the Conference Banquet is on Saturday evening. Tickets for the banquet were available for purchase on your registration form. Please see the Dining and Entertainment Guide near the back of this program for more information on possible lunch and dinner options. There is also a map in this booklet to help direct you.

Special Receptions and Functions

Please wear your namebadge to all official conference functions. Guest participation at each of the below functions requires the prior purchase of a ticket.

Opening Welcome Reception and Mixer – Tuesday evening, June 26 in Exhibit Hall #2 from 7:00p.m. – 9:00p.m.

Poster Session Reception and Mixer – Wednesday evening, June 27 in Exhibit Hall #2 from 7:00p.m. – 10:00p.m.

Conference Picnic – Thursday evening, June 28 at the Knoxville Zoo. Shuttles will begin at 5:30p.m. outside Exhibit Hall #1 at the Knoxville Convention/Exhibition Center (KCEC). Buses will run continuously between the Knoxville Zoo and the KCEC until all guests are returned by 10:00 p.m.

Outreach Seminar by Richard Lewontin – Friday evening, June 29 at the Knoxville Convention/Exhibition Center. The Seminar will be held in the Grand Ballroom from 7:30p.m. – 8:30p.m.

Music and Dancing – The Dance will be held in Exhibit Hall #1 beginning at 8:30p.m. and concluding at 11:00p.m. immediately following the Lewontin Outreach Seminar.

Conference Banquet – Saturday evening, June 30 at the Knoxville Convention/Exhibition Center in Exhibit Hall #1. This event requires the purchase of a ticket for both participants and guests, and will be held from 6:30p.m. – 9:00p.m.

Shuttle Service from the Campus Housing in Massey Hall

The shuttle service is complimentary to all participants housed in Massey Hall during the Evolution event. The shuttle will run continuously between Massey Hall and the Knoxville Convention/Exhibition Center according to the following schedule:

Tuesday, June 26	10am – 10:30pm
Wednesday, June 27	6:15am – 11pm
Thursday, June 28	6:15am – 6pm
Friday, June 29	6:15am – 11:30pm
Saturday, June 30	6:15am – 10pm

Participants of the Evolution Conference not staying in Massey Hall may also take this shuttle to get closer to Cumberland Avenue, where many lunch and dinner restaurants are located.

Messages and Event Information

The message boards will be located at the base of the escalators from the Holiday Inn in the Knoxville Convention/Exhibition Center. There will also be an Event Information Desk at this location. The Event Information Desk will have information about the talk schedules, meals, special functions, tours, and general information about Knoxville and the University.

Speaker Preparation Room

Meeting Rooms 1 & 2 in the Knoxville Convention/Exhibition Center will be available all week for speakers and presenters to prepare and preview slides. Please sign up on the sheet on the door to reserve a slot.

Tours and Excursions

The Tours and Excursions will depart from and return to the street in front of Exhibit Hall #1 at the Knoxville Convention/Exhibition Center. Participants must have their namebadges in order to participate on the tours for which they have registered. Please check in with the tour guide/manager before getting on the bus. Tour information sheets were given out at registration in order to provide more information regarding tour departures and returns. If you are registered for a tour and do not have your tour information sheet, please stop by the Event Information Desk at the the base of the escalators in the Knoxville Convention/Exhibition Center to pick one up.

Computers

The Conference Organizers have made available for participants the use of a computer lab located in the UT Conference Center on the 4th floor. The lab is located in Room 418 and will be open each day. Hours will be:

Wednesday, June 27	8am – 10:30pm
Thursday, June 28	8am – 7pm
Friday, June 29	8am – 7pm
Saturcay, June 30	8am – 7pm

Participants may check email or work on presentations using these computers at no cost. However, there will be a schedule posted on the door, as some small groups or exhibitors will be allowed to reserve the lab for 2 hours at a time. The schedule on the door will reflect when the lab is available for general use.

Emergency Numbers in Knoxville

Emergency Assistance	911
University Police Dept.	(865) 974-3114
Knoxville Police Dept.	(865) 215-7000
Knox County Sheriff's Dept.	(865) 215-2444
Knoxville Rescue Squad	(865) 546-4821
Ambulance Service	(865) 675-0775
Poison Control Center	1-800-288-9999
UT Medical Center	(865) 544-9000
Fort Sanders Reg. Med. Ctr.	(865) 541-1111
Children's Hospital	(865) 541-8000
Baptist Hospital	(865) 632-5011

NOTICE TO ALL SPEAKERS, SESSION MODERATORS AND POSTER PRESENTERS

Session Moderators: Please arrive early to your session. There will be a student volunteer to assist you with AV equipment. Before your session starts, introduce yourself to the speakers and confirm the title of their talk and the pronunciation of their name. At the start of the session announce the rules 1) Speakers have a total of 15 minutes – this time includes questions. 2) The session moderator will indicate the 12 minute mark by a prominent hand signal. 3) The session moderator will warn the speaker that 14 minutes is up by standing up. *The session moderator will politely, yet firmly cut the speaker off at 15 minutes.* If the 15 minute time-period has elapsed, remind the audience that they may chat with the speaker at the break. Please be firm and enforce these rules, as it will help the conference run smoothly. If there is a cancellation, allow that 15 minute time slot to pass, so that we stay on schedule. We thank you for your willingness to volunteer.

Speakers: Please check the schedule for the time of your talk. Please arrive early with your carousel loaded, or pre-load your presentation. Introduce yourself to the session moderator. Please respect the session moderator, and familiarize yourself with the time signals. Please take advantage of the speaker ready rooms (Meeting Rooms 1 and 2 in the Knoxville Convention/Exhibition Center) in order to prepare for your presentation.

Poster presenters: Posters will be on display during the entire event. Please post your poster at your allotted number by 7pm on Wednesday. Poster set up may begin at 10am on Tuesday morning, June 26 and should end on Tuesday by 7pm. Set-up may begin again on Wednesday morning, June 27 at 8am and must be complete by 7pm on Wednesday. Authors are required to stand by their posters during the poster session from 7pm to 9pm on Wednesday evening, June 27. Posters must be taken down by 5pm on Saturday evening.

Maximum area available for the poster is 1.2m x 1.2m (4 ft. x 4 ft.). Posters must be easily mounted and arranged in the space provided. Tacks for mounting will be furnished. The presenter must furnish any other mounting materials. Posters that require any electrical equipment or special audiovisuals must have prior written approval from the organizing committee.

THE ORGANIZING COMMITTEE

The planning, preparation, and implementation of this conference is a result of the generous time and efforts of the Local Organizing Committee:

Chair, Web mastering:
Massimo Pigliucci

Co-Chair, Exhibitors:
Mitch Cruzan

Scientific program:
Courtney Murren
Pat Cox
Chris Boake
Sergey Gavrilets

Symposia coordination:
Sandy Echternacht

Field trips and tours:
Susan Riechert

Housing, Transportation, Meals, and Registration:
Heather McNeal &
Jeremy Easterday from
UT Conferences

Audio Visuals:
Stan Guffey

Graduate student volunteers (coordination):
Randy Small

Outreach and Entertainment:
Lou Gross

Logo / Merchandise
Graduate Students
Associations in Botany and
EEB
Ed Lickey, Botany,
Tad Fukami, EEB,

Sponsors:
Foster Levy

Banquet:
Gary McCracken

Picnic:
Gordon Burghardt

SPECIAL MEETINGS DURING THE EVOLUTION 2001 EVENT

(Please note building codes: KCEC – Knoxville Convention/Exhibition Center, and UTCC – UT Conference Center)

TUESDAY, JUNE 26

Joint Council Meeting	KCEC Meeting Room 3	11am - 1:30pm
SSE Council Meeting	KCEC Meeting Room 3	2pm - 5:30pm
SSB Council Meeting	KCEC Meeting Room 4	2pm - 5:30pm
ASN Council Meeting	KCEC Meeting Room 5	2pm - 5:30pm

WEDNESDAY, JUNE 27

SSE Editorial Board Meeting	KCEC Meeting Room 3	12pm - 1:30pm
ASN Editorial Board Meeting	KCEC Meeting Room 4	12pm - 1:30pm
ASN General Business Meeting: Open to all members	Holiday Inn Tennessee Ballroom	5pm - 5:30pm
SSB General Business Meeting: Open to all members	KCEC Grand Ballroom	6:30pm - 7pm

THURSDAY, JUNE 28

SSB Editorial Board Meeting	KCEC Meeting Room 3	12pm - 1:30pm
SSE General Business Meeting: Open to all members	Holiday Inn Tennessee Ballroom	12pm - 1:30pm

❖ Special events for Invited K-12 Teachers

Computers and High School Biology – A Workshop for High School Teachers
Wednesday, June 27, 10am – 12pm in UTCC Room 418

Invited Education Lunch for Middle and High School Teachers
Wednesday, June 27, 12pm – 1:15pm in UTCC Room 400B

❖ Special Events for Student Diversity

Student Diversity Poster Session
Friday, June 29, 4:30pm – 6pm in KCEC Exhibit Hall #2.

❖ American Institute of Biological Sciences Media Training Program Pilot

"Going Public: Learn Effective Ways to Address the Media, Policy Makers, and the Public about Evolution"

KCEC Meeting Room 7

Wednesday, June 27	9am – 12pm
Thursday, June 28	9am – 4pm

DAILY EVENT SCHEDULE

(PLEASE NOTE BUILDING CODES: KCEC-KNOXVILLE CONVENTION/EXHIBITION CENTER, UTCC – UT CONFERENCE CENTER, HI-HOLIDAY INN)

TUESDAY, JUNE 26

Conference Registration	Holiday Inn Lobby (top of the escalators)	10am – 10pm
Exhibit Set-Up	KCEC Exhibit Hall 2	10am – 5pm
Conference welcome mixer	KCEC Exhibit Hall 2	7 pm – 9 pm
Poster Set-up	KCEC Exhibit Hall 2	10am – 5pm

WEDNESDAY, JUNE 27

Time	Session#	Session Title	Room number
8am-12pm	1	Symposium: SSE: Reinforcement in speciation	UTCC 413 ABC
8am-10am	2	Life history evolution	KCEC Salon A
	3	Plant-pollinator interactions	KCEC Salon B
	4	Molecular systematics - arthropods/mammals	KCEC Salon C
	5	Conservation biology	KCEC Salon D
	6	Evolutionary genetics of microorganisms	UTCC 406
	7	Genomics	HI TN Ballroom
10am-10:30am		*Coffee Break – Served in Foyer between Exhibit Hall #1 and Grand Ballroom and Hallway outside Exhibit Hall #1*	
10:30am-12pm	8	Phylogeography - plants	KCEC Salon A
	9	Phenotypic plasticity & G*E -plants	HI TN Ballroom
	10	Experimental evolution in microorganisms	UTCC 406
	11	Molecular systematics- metazoans	KCEC Salon B
	12	Combined data systematics -theory	KCEC Salon C
	13	Education **(MOVED TO THURS. @ 3:30p)**	
	69	Molecular evolution theory PART A **(MOVED FROM FRI. @ 1:15pm)**	KCEC Salon D
11:45am-1:15pm		Lunch – Served in the KCEC Exhibit Hall #1 for those who pre-paid and purchased the lunch package.	KCEC Exhibit Hall #1
12pm – 1pm		National Science Foundation (NSF) Informational Discussion – Sam Scheiner	HI TN Ballroom
1:10pm-5pm	14	Symposium SSE: Education followed by town meeting style discussion	UTCC 413 ABC
1:15pm-3pm	15	Developmental evolutionary biology	KCEC Salon A
	16	Ecological genetics –animals	HI TN Ballroom
	17	Molecular Systematics	KCEC Salon B
	18	Phylogeography – arthropods	KCEC Salon C
	19	QTL studies –animals	KCEC Salon D
	20	Viral evolution	UTCC 406
3pm-3:30pm		*Coffee break-Served in Foyer between Exhibit Hall 1 and Grand Ballroom and Hallway outside Exhibit Hall #1*	
3:30pm-5pm	21	QTL studies – plants	KCEC Salon A
	22	Social evolution –arthropods	UTCC 406
	23	Biogeography/geographic variation - arthropods	KCEC Salon B
	24	Biogeography / geographic variation - mammals	KCEC Salon C
	25	Combined data systematics	KCEC Salon D
	26	Speciation	HI TN Ballroom

SSB Presidential Address **David Maddison**	KCEC Grand Ballroom "An inordinate fondness for beetle phylogenies"	5:30 pm
SSB General Business Meeting	KCEC Grand Ballroom – directly following Presidential Address	6:30pm – 7pm
Poster Session 7pm – 10pm	KCEC Exhibit Hall 2	
WGBH Film preview of series on Evolution	Sponsored by Education section UT Conference Center – Room 413ABC	9pm – 10:30pm

THURSDAY, JUNE 28

Time	Session #	Title	Room
8am-12pm	27	Symposium NSF: Evolutionary and ecological functional genomics followed by afternoon contributed paper session and town hall meeting discussion	UTCC 413 ABC
8am-10am	28	Biogeography/geographic variation - arthropods	KCEC Salon B
	29	Speciation	UTCC 406
	30	Selection experiments	KCEC Salon A
	31	Phylogeny based comparative method	KCEC Salon C
	32	Molecular systematics	HI TN Ballroom
	33	Evolution of host-parasite interactions	KCEC Salon D
10am-10:30am		*Coffee Break*	
10:30am-12pm	34	Biogeography/geographic variation - fish	KCEC Salon D
	35	Ecological genetics - plants	HI TN Ballroom
	36	Evolution of behavior	KCEC Salon A
	37	Hybridization - arthropods	KCEC Salon C
	38	Speciation – theory	KCEC Salon B
	39	Phylogeography - amphibians	UTCC 406
11:45am – 1:15pm		Lunch- Served in the KCEC Exhibit Hall #1 for those who pre-paid and purchased the lunch package	KCEC Exhibit Hall #1
1:10pm-5pm	40	Symposium: ASN: Young investigator & Dobzhansky Prize winner	UTCC 413 ABC
1:15pm-3pm	41	Genomics	HI TN Ballroom
	42	Conservation biology	UTCC 406
	43	Sexual selection - arthropods	KCEC Salon C
	44	Population genetics - animals	KCEC Salon A
	45	Molecular evolution	KCEC Salon B
	46	Biogeography/Geographic variation	KCEC Salon D
3pm-3:30pm		*Coffee Break*	
3:30pm-5pm	47	Genomics	HI TN Ballroom
	48	Mating/breeding systems in plants	KCEC Salon A
	49	Macroevolution - animals	KCEC Salon C
	50	Combined data systematics	KCEC Salon B
	51	Phylogeny based comparative method – theory	KCEC Salon D
	13	Education **(Moved from Wed. at 10:30am)**	UTCC 406

Conference Picnic Knoxville Zoo (for all participants: name badge required)	Busses continuous cycle from 5:30pm to 10pm. Pick-up and drop-off outside Exhibit Hall #1 at KCEC.

FRIDAY, JUNE 29

Time	Session #	Title	Room
8am-12pm	52	Symposium: SSB: Developing uses for phylogenetic tree shape	UTCC 413 ABC
8am-10am	53	Genomics	HI TN Ballroom
	54	Evolutionary genetics of microorganisms	KCEC Salon A
	55	Evolution of sex	UTCC 406
	56	Molecular evolution	KCEC Salon B
	57	Plant reproductive biology	KCEC Salon C
	58	Mating/breeding systems in animals	KCEC Salon D
10am-10:30am		*Coffee break*	
10:30am-12pm	59	Coevolution	KCEC Salon D
	60	Genomics	HI TN Ballroom
	61	Inbreeding - plants	KCEC Salon C
	62	Speciation - arthropods	KCEC Salon B
	63	Sexual selection	UTCC 406
	64	Plant ecological genetics	KCEC Salon A
11:45am-1:15pm		Lunch – Served in the KCEC Exhibit Hall #1 for those who pre-paid and purchased the lunch package.	KCEC Exhibit Hall #1
12pm-1:15pm		*NSF Frontiers in Evolution Discussion*: led by Nick Barton SSE President	HI TN Ballroom
1:15pm-5pm	65	Symposium: SSB: Bayesian methods in phylogenetics	UTCC 413 ABC
1:15pm-3pm	66	Self-incompatibility/Population genetics of plants	KCEC Salon A
	67	Population genetics -arthropods	KCEC Salon B
	68	Life history evolution -fish	KCEC Salon C
	69	Molecular evolution – theory – **PART B**	UTCC 406
	70	Mechanisms of reproductive isolation	HI TN Ballroom
	71	Species interactions	KCEC Salon D
3pm-3:30pm		*Coffee break*	
3:30pm-5pm	72	Developmental evolutionary biology - plants	HI TN Ballroom
	73	Population genetics theory	KCEC Salon D
	74	Evolution of host-parasite	KCEC Salon C
	75	Phylogeography - animals	KCEC Salon B
	76	Mating/breeding systems in plants	KCEC Salon A

ASN Presidential Address J. Thomson	KCEC Grand Ballroom "When is it mutualism"	5:30pm-7pm
Outreach Seminar Richard Lewontin	KCEC Grand Ballroom "Coevolution of Organisms and the Environment"	7:30pm- 8:30pm
Dance Party	KCEC Exhibit Hall 1	8:30pm to 11pm

SATURDAY, JUNE 30

Time	Session #	Title	Room
8am – 12pm	77	Symposium: ASN: Consequences of infection for host evolution and ecology	UTCC 413 ABC
8am-10am	78	Genomics	HI TN Ballroom
	79	Developmental evolutionary biology	KCEC Salon A
	80	Hybridization - plants	KCEC Salon D
	81	Molecular systematics - plants/fungi	UTCC 406
	82	Mechanisms of reproductive isolation	KCEC Salon B
	83	Molecular systematics- animals	KCEC Salon C
10am-10:30am		*Coffee break*	
10:30am-12pm	84	Molecular evolution - plants	KCEC Salon A
	85	Biogeography of metazoans	KCEC Salon B
	86	Plant systematics	KCEC Salon C
	87	Systematics - animals	KCEC Salon D
	88	Phenotypic plasticity & G*E - animals	HI TN Ballroom
11:45am – 1:15pm		Lunch – Served in the KCEC Exhibit Hall #1 for those who pre-paid and purchased the lunch package.	KCEC Exhibit Hall #1
12pm – 1pm		National Institutes of Health (NIH) Informational Discussion – Irene Eckstrand	HI TN Ballroom
1:15pm-3pm	89	Life history evolution	KCEC Salon A
	90	Phenotypic plasticity & G*E - arthropods	KCEC Salon B
	91	Plant reproductive biology	HI TN Ballroom
	92	Population genetics theory	UTCC 406
	93	Molecular systematics -birds	KCEC Salon C
	94	Hybridization	KCEC Salon D
3pm-3:30pm		*Coffee break*	
3:30pm-5pm	95	Ecological genetics - animals	HI TN Ballroom
	96	Developmental evolutionary biology theory	KCEC Salon D
	97	Evolution of host parasite - arthropods	KCEC Salon A
	98	Evolution of behavior	KCEC Salon B
	99	Mechanisms of reproductive isolation	KCEC Salon C
	100	Speciation - plants	UTCC 406

SSE Presidential Address, Nick Barton	KCEC Grand Ballroom, "What is Evolutionary Biology?"	5:30pm-6:30pm
Conference Banquet TICKET REQUIRED	KCEC Exhibit Hall 1	6:30pm – 9pm

DETAILED SCHEDULE OF SESSIONS

Symbols used throughout # indicates session number as in general program
* indicates speaker/presenter
§ indicates contender for the Mayr award

WEDNESDAY SYMPOSIA AND CONTRIBUTED PAPERS

#1 Symposium SSE: Reinforcement in Speciation **Organizer: Mohamed Noor**
UT Conference Center 413 ABC

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8:00 - 8:30 1 Speciation by reinforcement: Questions, progress, and prospects
Mohamed Noor
Louisiana State University, mnoor@lsu.edu

8:30 - 9:00 2 Inferences of gene flow between species
John Wakeley
Harvard University, wakeley@fas.harvard.edu

9:00 - 9:30 3 Reinforcement according to GaRPs (Gamete Recognition Proteins)
Michael Hellberg
Louisiana State University, mhellbe@lsu.edu

9:30 - 10:00 4 Reinforcement and beyond: forces in the adaptive evolution of premating isolation
Maria Servedio
University of California at Davis, mrservedio@ucdavis.edu

10:30 - 11:00 5 Natural selection and the evolution of premating isolation in sticklebacks: from beginning to end
Howard Rundle
University of British Columbia, rundle@zoology.ubc.ca

11:00 - 11:30 6 Mimetic color patterns as mating signals: Speciation in Heliconius butterflies
Chris Jiggins
Smithsonian Tropical Research Institute, jigginsc@stri.si.edu

11:30 - 12:00 7 Reinforcement: a review of its underpinnings and sequelae
Jeremy Marshall
New Mexico State University, jeremym@nmsu.edu

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#2 Life history evolution **Session Moderator: Charles R. Richardson**
KCEC Grand Ballroom Salon A

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8:15-8:30 8 Life history constrains sexual selection in a territorial butterfly
Kemp, D. J.
darrell.kemp@jcu.edu.au School of Tropical Biology, James Cook University.

8:30-8:45 9 Effects of Male Genotype on the Fecundity of his Mate in a Seed Beetle, *Stator limbatus*
Czesak, M.E.
meczes0@pop.uky.edu University of Kentucky

8:45-9:00 10 Life-history tradeoffs and genotypic variation in the dioecious liverwort *Marchantia inflexa*
***Charles R. Richardson, D. Nicholas Mc Letchie and Philip H. Crowley**
crrich2@pop.uky.edu, mclet@pop.uky.edu , pcrowley@POP.UKY.EDU
Center for Ecology, Evolution and Behavior and the T.H. Morgan School of Biological Sciences, University of Kentucky, Lexington KY

9:00-9:15 11 Clonal behavior depends on sexual prospects in the brittle star *Ophiactis savignyi*
McGovern, T.M.
mcgovern@bio.fsu.edu Department of Biological Science, Florida State University, Tallahassee, FL 32306-1100

9:15-9:30 12 A Cost of Reproduction in *Drosophila melanogaster*: Stress Susceptibility
***Harshman, L.G., Wang, Y., Salmon, A.B.**
lharsh@unlserve.unl.edu School of Biological Sciences, University of Nebraska-Licoln, Lincoln, NE 68588

9:30-9:45 13 The endocrine-genetic regulation of early reproduction and dispersal in a wing-polymorphic cricket: The plot thickens
Anthony J. Zera
azera@unlserve.unl.edu School of Biological Sciences, University of Nebraska

9:45-10:00 14 A life-history tradeoff limits adaptation in long-term populations of *E. coli*
Cooper, V. S.
vcooper@umich.edu Department of Biology, University of Michigan, Ann Arbor, MI 48109

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#3 Plant/pollinator interactions **Session Moderator: T. Holtsford**
KCEC Grand Ballroom Salon B

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8:15-8:30 15 Phylogeny, floral host preference and convergence in *Callandrena* (Hymenoptera: Andrenidae: Andrena)
§*Larkin, L. L., Neff, J. L., & Simpson, B. B.
leah-perle@mail.utexas.edu, jlnatctmi@yahoo.com, beryl@mail.utexas.edu,
Section of Integrative Biology, University of Texas at Austin, Austin, TX 78712;
Central Texas Melittological Institute, 7307 Running Rope, Austin, TX 78731;
Section of Integrative Biology, University of Texas at Austin, Austin, TX 78712

8:30-8:45 16 Negative frequency-dependent selection in plant-pollinator interactions: fact or fiction?
***Gigord, L D. B.., Macnair, M. & Smithson, A.**
L.D.B.Gigord@exeter.ac.uk
Hatherly Laboratories Department of Biological Sciences University of Exeter ,Prince of Wales Road Exeter EX4 4PS United-Kingdom Tel: 44 (0) 1392 263 786 Fax: 44 (0) 1392 263 700

8:45-9:00 17 Why has rewardlessness evolved in the Orchidaceae? A novel hypothesis
Ann Smithson
A.Smithson@exeter.ac.uk, Hatherly Laboratories, Prince of Wales Road, University of Exeter,
EX4 4PS Exeter, United Kingdom

9:00-9:15 18 Hummingbirds in three dimensions: responses to inflorescence architecture
***Gross, W.E. & Harder, L.D.**
egross@ucalgary.ca, harder@ucalgary.ca University of Calgary, Calgary, Alberta, Canada

9:15-9:30 19 Pollinator-mediated floral evolution: environmental and interaction effects
***Holtsford, T. & Ippolito, A.**
HoltsfordT@missouri.edu Division of Biological Sciences, University of Missouri

9:30-9:45 20 Evidence for reinforcement in pollinator-sharing Neotropical *Costus*
***Kay, K. M.**
kay@u.washington.edu Department of Botany University of Washington, Seattle

9:45-10:00 21 Predicting patterns of mating and rates of hybridization from pollinator behavior
***Campbell, D. R., Waser, N. M., & Pederson, G. T.**
drcampbe@uci.edu University of California, Irvine, University of California, Riverside, Rocky Mountain Biological Laboratory

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#4 Molecular systematics **Session Moderator: Steve Jordan**
KCEC Grand Ballroom Salon C

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8:30-8:45 23 Solving Anophelinae (Culicidae) phylogeny puzzle:
What can we learn from a molecular approach?
***Krzywinski, J., Wilkerson, R., Besansky**
N. jaroslaw.krzywinski.1@nd.edu
Department of Biological Sciences, University of Notre Dame; Walter Reed Biosystematics Unit, Smithsonian Institution; Department of Biological Sciences, University of Notre Dame

8:45-9:00 24 Talk Cancelled

9:00-9:15 25 The Evolution of Arboreal Carabid Beetles
Ober, K. A.
kober@u.arizona.edu Interdisciplinary Program in Insect Science, The University of Arizona

9:15-9:30 26 Genetic Differentiation Among African Elephant Populations
***Roca, A.L.1, Georgiadis, N.Ý, Slattery, J.P.1 & O'Brien, S.J.1**
roca@mail.ncifcrf.gov 1Laboratory of Genomic Diversity, National Cancer Inst., Frederick, MD;
ÝMpala Research Center, Nanyuki, Kenya

9:30-9:45 27 Nuclear genes and the resolution of higher level mammalian phylogeny
***Murphy, W.J., Eizirik, E. & S. J. O'Brien**
murphywi@mail.ncifcrf.gov Laboratory of Genomic Diversity, National Cancer Institute, Frederick, MD 21702

9:45-10:00 28 Nuclear DNA phylogeny of the squirrels using RAG-1 and c-myc
***Steppan, S. J., Storz, B. L., & Hoffmann, R. S.**
steppan@bio.fsu.edu, bstorz@bio.fsu.edu, hoffmann.robert@nmnh.si.edu, Dept. of Biological Science, Florida State University, Tallahassee, FL, Dept. of Biological Science, Florida State University, Tallahassee, FL, National Museum of Natural History, Smithsonian Institution, Washington, DC

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#5 Conservation biology **Session Moderator: Carlos Garza**
KCEC Grand Ballroom Salon D

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8:15-8:30 29 QTLs and Conservation: A changing approach to the endangered Gila Trout
***Wares, J. P. & T. F. Turner**
jpwares@unm.edu Department of Biology, University of New Mexico

8:30-8:45 30 Forces driving genetic introgression between a rare endemic fish species (*Cyprinodon pecosensis*) and its cosmopolitan congener (*C. variegatus*).
Rosenfield, J.A.
jrsalmom@unm.edu Department of Biology, University of New Mexico

8:45-9:00 31 Unnatural selection: can salmon hatcheries unintentionally drive evolution?
***Heath, D.D., Bryden, C.A., Heath, J.W.**
dheath@uwindsor.ca Great Lakes Institute for Environmental Research,University of Windsor; Biology, University of Northern British Columbia; Yellow Island Aquaculture Ltd.

9:00-9:15 32 Correlates of extinction risk in bats (Mammalia: Chiroptera)
***Jones, K.E., Purvis, A., Gittleman, J.L.**
kate.jones@virginia.edu Department of Biology, University of Virginia, Charlottesville, Virginia 2904-4328, USA; Department of Biology, Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, UK; Department of Biology, University of Virginia, Charlottesville, Virginia 22904-4328

9:15-9:30 33 Re-introduction of wild goats in Israel: A case study of the Agrimi (*Capra aegagrus cretica*) using mitochondrial markers
***Kahila Bar-Gal, G., Smith, P., Tchernov, E., Greenblatt, C. and Kolska Horwitz, L.**
gilak@ncifcrf.gov (1) G. Kahila Bar-Gal* and C. Greenblatt, Kuvin Center for the study of Infectious and Tropical Diseases, The Hebrew University, Hadassah Medical School, POB 12272, Jerusalem 91120, Israel. (2) P. Smith, Laboratory of Bioanthropology and ancient DNA, Department of Anatomy and Embryology, The Hebrew University, Hadassah Medical School, POB 12272, Jerusalem 91120, Israel. (3) E. Tchernov and L.K. Horwitz, Department of Evolution, Systematics and Ecology, Faculty of Life Sciences, The Hebrew University of Jerusalem, Jerusalem 91904, Israel. * Current address: Laboratory of Genomic Diversity, National Cancer Institute, Frederick, MD 21702-1201. Email: gilak@ncifcrf.gov

9:30-9:45 34 Detection of reduction in population size in Pacific Salmon
Garza, John Carlos
carlos.garza@noaa.gov Southwest Fisheries Science Center, Santa Cruz Laboratory

9:45-10:00 35 Evaluating changes in population structure of the lake trout in the upper Great Lakes using ancient DNA.
***Guinand B, Page K.S., Burnham-Curtis M.K. & Scribner K.T.**
guinand@pilot.msu.edu; pagekev1@pilot.msu.edu; Mary_Curtis@usgs.gov; scribne3@pilot.msu.edu, Guinand B., Page K.S. and Scribner K.T. Michigan State University, Department of Fisheries and Wildlife 13, Natural Resources Building East Lansing MI 48824-1222, USA; Burnham-Curtis MK* USGS Great Lakes Science Center, 1451, Green Road, Ann Arbor, MI 48105, USA* present address: National Fish and Wildlife Forensics Laboratory,1490 East Main St., Ashland, OR 97520, USA

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#6 Evolutionary genetics of microorganisms **Session Moderator: Michael Travisano**
UT Conference Center Room 406

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8:30-8:45 36 Genetic Trends in a Population Evolving Antibiotic Resistance
***Levy, F. & Walker, E. S.**
levyf@etsu.edu, walkeres@etsu.edu
Department of Biological Sciences, East Tennessee State University, Johnson City, Tennessee 37614; James H. Quillen Veterans Affairs Medical Center, Mountain Home, Tennessee 37684

8:45-9:00 37 How to build a pathogenic island: Some ideas from molecular evolution in *E. coli*
***Souza, V., Castillo, A., Sandner L. & Eguiarte, L.E.**
souza@servidor.unam.mx Departamento de Ecología Evolutiva, Instituto de Ecología, UNAM, AP 70-275 Coyoacan 04510 México DF

9:00-9:15 38 Talk Cancelled

9:15-9:30 39 Genomic Evolution and Nuclear Choice in *Microbotryum violaceum*
***Hood, M. E. & Antonovics, J.**
michael.hood@virginia.edu Department of Biology, University of Virginia

9:30-9:45 40 Fitness as a Function of Distance and Dispersal
***Travisano, M. & Greig, D**
mtrav@uh.edu, dgreig@ucl.ac.uk, University of Houston

9:45-10:00 41 Pathoadaptive allelic variation at fimH in *E. coli*: important, recent, and recurrent
***Feldgarden, M., & Dykhuizen, D.E.**
mfeld@life.bio.sunysb.edu Dept. of Ecology and Evolution, SUNY Stony Brook

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#7 Genomics **Session Moderator: S. K. McWeen**
Holiday Inn Tennessee Ballroom

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8:00-8:15 42A Nucleotide Variability Within and Around G6pd, a Locus Under Balancing Selection in Humans.
***Saunders, MA. Hammer MF, Nachman MW**
msaunder@u.arizona.edu Ecology and Evolutionary Biology Department, University of Arizona

8:15-8:30 42 Analysis of microarray time series data: implications for gene regulation
S.K. McWeeney
shannon@pcbi.upenn.edu Penn Center for Bioinformatics, University of Pennsylvania

8:30-8:45 43 Mito-tater and Mito-base: Tools for annotating and comparing mitochondrial genomes
Haim, A. & *Boore, J.
steelbrz@uclink4.berkeley.edu, boore1@llnl.gov DOE Joint Genome Institute

8:45-9:00 44 Novel Method for the rapid Cloning of Mitochondrial Genomes for Sequencing
***Fourcade, H. M., Boore, J.**
MHFourcade@lbl.gov, Boore1@llnl.gov, Joint Genome Institute

9:00-9:15 45 Pattern of similarity in intergenic regions in *C. elegans* and *C. briggsae* genomes
Webb, C. T.
webb@ncbi.nlm.nih.gov National Institutes of Health and Cornell University

9:15-9:30 46 Deriving functional and evolutionary relationships from sequence data: Insights from the novel TAPS gene family in four model organisms
***Kovalick, G.E., and Schafersman, S.D.**
kovalick_g@utpb.edu, schafersman@utpb.edu, University of Texas of the Permian Basin

9:30-9:45 47 Use of cDNA array hybridizations to identify genes responsible for elevated copia transposition.
***Harmon, K.L., Omansky, A. Xiong, L.E. and Nuzhdin, S.V.**
klmartinez@ucdavis.edu, Section of Evolution & Ecology, University of California Davis, Davis, CA.

9:45-10:00 48 Genomic number of recessive lethals in a natural population of a fish, *Lucania goodie*
***Fuller, R.C. & Kondrashov, A.S.**
fuller@neuro.fsu.edu Department of Biological Sciences, Florida State University, Tallahassee, FL 32306-1100; National Center for Biotechnology Information, National Institutes of Health, 45 Center Drive, MSC 6510, Bethesda, MD 20892-6510

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Wednesday late morning - 10:30 to noon

#1 Symposium SSE: Reinforcement in Speciation, continued **UT Conference Center 413 ABC**

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#8 Phylogeography of plants **Session Moderator: Christopher Dick**
KCEC Grand Ballroom Salon A

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10:30-10:45 49 Networks and the study of New Zealand alpine buttercups
Peter Lockhart
p.j.lockhart@massey.ac.nz Institute of Molecular BioSciences, Massey University, Palmerston North, New Zealand

10:45-11:00 50 Phylogeographic patterns in the *Piriqueta caroliniana* complex
***McBreen, K. & Cruzan, M.B.**
kmcbreen@utk.edu, cruzan@utk.edu
Department of Ecology and Evolutionary Biology, University of Tennessee

11:00-11:15 51 The post-glacial history of *Trillium* (Trilliaceae) in North America: Inferences from phylogeography
***Griffin, Steven R., & Barrett, Spencer C. H.**
griffin@botany.utoronto.ca Department of Botany, University of Toronto

11:15-11:30 52 Phylogeographic discordance among neotropical trees across the Andes
***Dick, C. & Bermingham, E.**
dickc@naos.si.edu Smithsonian Tropical Research Institute Unit 0948 APO AA 34002-0948 USA

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#9 Phenotypic plasticity and GxE **Session Moderator: S. J. Tonsor**
Holiday Inn Tennessee Ballroom

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10:30-10:45 53 Phenotypic plasticity to foliar and neutral shade in gibberellin mutants of *Arabidopsis thaliana*
***Pigliucci, M. & Schmitt, J.**
pigliucci@utk.edu; Johanna_Schmitt@brown.edu, Departments of Botany and of Ecology & Evolutionary Biology, University of Tennessee; Department of Ecology & Evolutionary Biology, Brown University

10:45-11:00 54 Do trait variances and covariances change across CO2 environments in *Arabidopsis*?
***Tonsor, S., Brautigam, P., and VanderMeulen, M.**
tonsor@pitt.edu University of Pittsburgh

11:00-11:15 55 Polygenic variation maintained by genotype-environment interactions
***Turelli, M. & Barton, N. H.**
mturelli@ucdavis.edu Section of Evolution and Ecology, University of California, Davis, CA

11:15-11:30 56 Pattern and frequency of selection on shade avoidance traits in a natural population of *Impatiens capensis*
***Huber, H. & Schmitt, J.**
Heidrun_Huber@brown.edu Ecology & Evolutionary Biology, Brown University

11:30-11:45 57 Talk Cancelled

11:45-12:00 58 Why *Spergularia marina* (Caryophyllaceae) produces winged seeds: a response to stress or an aid to the dispersal of large seeds?
***Mazer, S. & Lowry, E.**
mazer@lifesci.ucsb.edu, lowry@lifesci.ucsb.edu Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara, Santa Barbara, California, 93106

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#10 Experimental evolution **Session Moderator: Adam Chippendale**
UT Conference Center Room 406

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10:30-10:45 59 Predator-prey genotype by environment interactions
***Quance, M. & Travisano, M.**
mquance@uh.edu, mtrav@uh.edu University of Houston, University of Houston

10:45-11:00 60 Evolutionary branching in experimental bacteria populations
***Saxer, G., Doebeli, M. & Travisano, M.**
saxer@zoology.ubc.ca, doebeli@zoology.ubc.ca, mtrav@uh.edu
University of British Columbia (Saxer, Doebeli), University of Houston (Travisano)

11:00-11:15 61 Maintenance of diversity in experimental microbial communities
***Goldman, R. and Travisano, M.**
rgoldman@mail.uh.edu, mtrav@uh.edu Department of Biology and Biochemistry, University of Houston, Houston, TX 77204-5513

11:15-11:30 62 Evolution and Coevolution in a Bacterial Mutualism:
Experimental Evolution of *E. coli* and *Enterococcus faecalis*
***Rutter, M.T. & Rausher, M.D.**
mtr5@duke.edu Duke University

11:30-11:45 63 Crouching X, Hidden Y: Sex Chromosomes & Fitness in Drosophila
***Chippindale, Adam**
chippind@lifesci.ucsb.edu University of California, Santa Barbara

11:45-12:00 64 Cooperation and Conflict between two bacteriophages: An Experimental System.
***Sachs, J.L.**
jlsachs@mail.utexas.edu University of Texas-- Austin, Department of Integrative Biology

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#11 Molecular systematics **Session Moderator: Alonso J. Cordoba**
KCEC Grand Ballroom Salon B

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10:30-10:45 65 Deep-sea pogonophoran tubeworm (Annelida) evolution driven by endosymbiont preferences?
Halanych, K. M.
khalanych@whoi.edu Woods Hole Oceanographic Institution

10:45-11:00 66 Assessing the utility of a novel nuclear protein-coding gene (the sodium-potassium ATPase alpha subunit) for metazoan phylogenetic analysis
***Cordoba, A. & Anderson, F.**
ajcg@siu.edu, feander@siu.edu Department of Zoology and Center for Systematic Biology, Southern Illinois University, Carbondale, IL 62901

11:00-11:15 67 Use of COI to infer phylogenetic relationships among Caribbean scleractinian corals
***Snell, T.L. and Coffroth M.A.**
tlsnell@buffalo.edu coffroth@acsu.buffalo.edu University at Buffalo, University at Buffalo

11:15-11:30 68 Taxonomy of freshwater physids: a molecular examination of *Physa heterostropha, P. integra*, and *P. acuta*
***Amy R. Wethington**
wethi001@bama.ua.edu; amyw65@juno.com University of Alabama

11:30-11:45 69 Rooting the reverse transcriptase tree: implications for understanding the evolution of retroid elements
§Rest, J.S.
jrest@umich.edu Department of Ecology and Evolutionary Biology and Museum of Zoology, University of Michigan

11:45-12:00 70 100 million years of genetic divergence hidden by complete morphological stasis in the cosmopolitan brittle star *Amphipholis squamata*
§*Sponer, R. & Roy, M.S.
renate.sponer@stonebow.otago.ac.nz, michael.roy@stonebow.otago.ac.nz Dept. Zoology, University of Otago, Dunedin, New Zealand

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#12 Combined data systematics - theory **Session Moderator: A. D. Yoder**
KCEC Grand Ballroom Salon C

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10:30-10:45 71 Mitochondrial DNA recombination
Ladoukakis, M & E. Zouros*
zouros@imbc.gr Department of Biology, University of Crete, Institute of Marine Biology of Crete, Greece

10:45-11:00 72 Reconstructing phylogenies from characters on a large state space
Mike Steel
m.steel@math.canterbury.ac.nz Director, Biomathematics Research Centre, University of Canterbury, Christchurch, New Zealand

11:00-11:15 73 Towards an inclusive philosophy for phylogenetic inference
Faith, D. P.
danf@austmus.gov.au Australian Museum, 6 College St. , Sydney, 2010, Australia

11:15-11:30 74 Incomplete Taxon Sampling is Not a Problem for Phylogenetic Inference
§*Rosenberg, M. S. & Kumar, S.
msr@asu.edu Department of Biology, Arizona State University, Tempe, AZ, Department of Biology, Arizona State University, Tempe, AZ

11:30-11:45 75 Testing the effects of methods, characters, and taxa on a persistent problem in primate phylogeny
***Yoder, A.D. & J.P. Huelsenbeck**
ayoder@nwu.edu johnh@brahms.biology.rochester.edu Yoder:Northwestern University & Field Museum of Natural History, Huelsenbeck: University of Rochester

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#13 Education MOVED TO THURSDAY AT 3:30pm IN UTCC ROOM 406

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#69 Molecular evolution theory – PART A Session Moderator: L. Yampolsky
UT Conference Center Room 406 MOVED FROM FRIDAY AT 1:15PM

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10:30-10:45 441 A Model to Explain Distinct Modes of Enhancer Evolution in Populations of Different Size
***Carter, A.J.R. and Wagner, G.P.**
ashley.carter@yale.edu and gunter.wagner@yale.edu Yale University; Department of Ecology and Evolutionary Biology

10:45-11:00 442 Slightly deleterious mutation, neutrality tests, and the structure of genealogies
***Williamson, S.**
swilliamson@ukans.edu Ecology and Evolutionary Biology, University of Kansas

11:00-11:15 443 Evolutionary inference using serial samples of molecular sequences
***Rodrigo, A. G., Drummond, A., and Goode, M.**
a.rodrigo@auckland.ac.nz School of Biological Sciences, University of Auckland

11:15-11:30 444 Phylogenetic landscapes in simulated versus actual nucleotide sequence data sets
***Lewis, P., Jordan, S., Bell, C., & Swofford D.**
paul.lewis@uconn.edu, steve.jordan@uconn.edu, charles.bell@yale.edu, swofford@lms.si.edu University of Connecticut, University of Connecticut, Yale University, Smithsonian Institution

11:30-11:45 445 Evolution of the Myc-Max-Mad Network of Helix-Loop-Helix Transcription Factors
William R. Atchley
atchley@ncsu.edu Department of Genetics, Center for Computational Biology, North Carolina State University, Raleigh, NC 27695-7614

11:45-12:00 447 Mutation Bias-Free Amino Acid Exchangeability Matrix
***Yampolsky, L. Y. & Stoltzfus**
A. lev@carb.nist.gov Center for Advanced Research in Biotechnology, University of Maryland/NIST

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LUNCH Break from 11:45am to 1:15pm

#14 Symposium SSE: Education Symposium Organizers: I. Eckstrand and C. Nelson
UT Conference Center 413 ABC

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1:10 to 1:20 78 Introduction **I. Eckstrand and C. Nelson**
ECKSTRAI@nigms.nih.gov, NIGMS, Washington, D. C.; Department of Biology at Indiana University (Bloomington)

1:20 -1:50 79 Evolution is Good Science
Judy Scotchmoor
Museum of Vertebrate Paleontology , University of California Berkeley

1:50-2:20 80 In Defense of Fundamentalism
Wayne Carley
National Association of Biology Teachers

2:20-2:50 81 Is Education in the Mission of a Professional Society?
Martin Feder
Society for Integrative and Comparative Biology

3:20-3:50 82 The Role of Scientists and Scientific Societies in Meeting the Challenges to Teaching Evolution in the Public Schools - the Public Policy Prospective
Ellen Paul
American Institute of Biological Sciences

3:50-4:20 83 Evolution: A PBS Series 4.6 Years in the Making
Joseph Levine
WGBH, Boston

4:20 -5:30 84 Town hall meeting: discussion of education topics led by Eckstrand and Nelson

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#15 Developmental evolutionary biology Session Moderator: N. King
KCEC Grand Ballroom Salon A

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1:30-1:45 85 The Evolutionary and Developmental Basis of the Wing Polymorphism in Ants
***Ehab Abouheif and Gregory A. Wray**
abouheif@duke.edu Department of Biology, Duke University

1:45-2:00 86 Evolution and development of novel polyphenic thresholds in a horned beetle
***Moczek, Armin P. & Nijhout, H. Frederik**
armin@duke.edu, hfn@duke.edu Department of Biology, Duke University, Durham, NC, USA

2:00-2:15 87 Selecting for lower levels of fluctuating asymmetry of novel mutant eyespots in *Bicyclus anynana*
***Breuker, C.J. & Brakefield, P.M.**
breuker@rulsfb.leidenuniv.nl Evolutionary Biology, EEW, Leiden University

2:15-2:30 88 Gene duplication and the evolution of noncoding DNA
***Chiu, C-H. & Wagner, G.P.**
chi-hua.chiu@yale.edu, gunter.wagner@yale.edu Department of Ecology and Evolutionary Biology, Yale University, New Haven, CT 06520-8106

2:30-2:45 89 Choanoflagellates and the evolution of Metazoa
***King, N., Carroll, S.B.**
nicoleking@facstaff.wisc.edu Laboratory of Molecular Biology/HHMI, University of Wisconsin Madison

2:45-3:00 90 Dopamine metabolism and melanin pattern evolution in *Drosophila*
***True, J. R. and Carroll, S.B.**
jrtrue@facstaff.wisc.edu, sbcarrol@facstaff.wisc.edu Laboratory of Molecular Biology HHMI University of Wisconsin Madison WI 53706

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#16 Ecological genetics **Session Moderator: D. Roy**
Holiday Inn Tennessee Ballroom

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1:30-1:45 91 Slug populations in space and time; what do molecular markers reveal?
***Brookes, R.C., Barker, J.H.A., Bohan, D.A., Glen, D.M. and Karp, A.**
Rachael.Brookes@BBSRC.ac.uk IACR - Long Ashton Research Station, University of Bristol, Long Ashton, Bristol, BS41 9AF, UK

1:45-2:00 92 Patterns of Evolution and Natural Selection in the Fossil Record
Michael A. Bell & *Matthew P. Travis
mtravis@life.bio.sunysb.edu Department of Ecology and Evolution, SUNY Stony Brook (both authors)

2:00-2:15 93 Can empty water be a barrier? Population Structure of telmathrinid (sailfin) and oryzias (ricefish) in an ancient, continental island lake, Lake Matano Sulawesi Indonesia
***Roy, D., D.D. Heath, and G.D. Haffner,**
royf@uwindsor.ca, dheath@uwindsor.ca, haffner@uwindsor.ca Great Lakes Institute for Environmental Research, University of Windsor, Windsor Ont, Canada.

2:15-2:30 94 Distinct genetic differentiation in *Drosophila melanogaster* populations derived from adjacent microclimates ("Evolution Canyon" case, Israel)
***Michalak, P., Minkov, I., Korol, A., Feder, M. & Nevo, E.**
michalak@research.haifa.ac.il Department of Organismal Biology & Anatomy, The University of Chicago; Institute of Evolution, University of Haifa, Israel

2:30-2:45 95 Modelling climate change, modes of inheritance, and sex ratio evolution in a reptile with temperature-dependent sex determination
Morjan, C.
milne@iastate.edu Iowa State University

2:45-3:00 96 Equivalent inbreeding depression under laboratory and near-natural conditions in a tree-hole-breeding mosquito
***Armbuster, P., Hutchinson, R., and Linvell, T.**
parmbrus@zoo.uvm.edu University of Vermont

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#17 Molecular Systematics **Session Moderator: A. Crawford**
KCEC Grand Ballroom Salon B

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1:15-1:30 97 Archosaur rhodopsin: ancestral reconstruction and gene synthesis
***Chang, B., Jonsson, K., Kazmi, M., Donoghue, M. & Sakmar T.**
changb@rockvax.rockefeller.edu Rockefeller University, New York, Yale University (for Michael Donoghue)

1:30-1:45 98 Talk Cancelled

1:45-2:00 99 Origins of diversity among toxins of fish-eating *Conus gastropods*
Duda, T.F.,
dudat@naos.si.edu Smithsonian Tropical Research Institute, República de Panamá

2:00-2:15 100 Lophophorate mitochondrial genomes: phylogeny and molecular evolution
***Kevin G. Helfenbein and Jeffrey L. Boore**
kgh@umich.edu; boore1@llnl.gov, University of Michigan and DOE Joint Genome Institute; University of Michigan and DOE Joint Genome Institute

2:15-2:30 101 Intron Sequence Evolution: Variation Among Loci in Species Divergence Caused by Ancestral Polymorphism and Heterogeneous Rates of Evolution
***Hare, M.P. & Palumbi, S.R.**
matt.hare@umail.umd.edu, spalumbi@oeb.harvard.edu

2:30-2:45 102 Rates of silent site divergence in frogs
Crawford, A. J.
crawfordaj@nzp.si.edu National Zoological Park, Smithsonian Institution

2:45-3:00 103 Nonadaptive Molecular Evolution: Are Amino Acid and Codon Usage Spandrels?
Knight, R.D.,
rdknight@princeton.edu Department of Ecology and Evolutionary Biology, Princeton University

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#18 Phylogeography **Session Moderator: Shellee Morehead**
KCEC Grand Ballroom Salon C

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1:15-1:30 104 The effect of distant outgroups on estimates of among site rate variation: The Hawaiian damselflies as a case study
§*Steve Jordan & Chris Simon
Steve.Jordan@UConn.edu University of Connecticut, Department of Ecology and Evolutionary Biology

1:30-1:45 105 Comparative phylogeography of Caribbean snapping shrimps: the role of larval dispersal ability
Cheryl L. Morrison, J. Emmett Duffy
clmorris@vims.edu Virginia Institute of Marine Sciences

1:45-2:00 106 Phylogeography of the facultatively social sweat bee, *Halictus rubicundus*
§*Soucy, S. L. & Danforth, B. N.
soucy@bio.fsu.edu Department of Ecology and Evolution, State University of New York at Stony Brook, Stony Brook, NY, Department of Entomology, Cornell University, Ithaca, NY

2:00-2:15 107 Phylogenetic relationships among Mordellid beetles in goldenrod galls
***Morehead, S.A., Whipple, A., Russell, M., & Abrahamson, W.G.**
smorehea@bucknell.edu Bucknell University, Department of Biology, Lewisburg, PA 17837

2:15-2:30 108 Cline or no cline across a butterfly hybrid zone? Nuclear and mitochondrial markers are at odds
***Leebens-Mack(1), J.H., Porter(2), A., & Henshaw(2), M.**
jleebensmack@colgate.edu; aporter@ent.umass.edu; nshawm@ent.umass.edu, Colgate University, Dept. of Biology (1); University of Massachusetts, Dept. of Entomology (2)

2:30-2:45 109 Comparative Phylogeography of Glacial Relict Crustaceans in North America
***Dooh, R.T. & Hebert, P.D.N.**
rdooh@uoguelph.ca University of Guelph, University of Guelph

2:45-3:00 110 Phylogeography of the longhorn cactus beetles *Moneilema spp*. Say (Coleoptera: Cerambycidae) and the History of the American Deserts
§*Smith, Christopher Irwin, and Farrell, Brian D.
csmith@oeb.harvard.edu; bfarrell@oeb Museum of Comparative Zoology, Harvard University.

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#19 QTL studies **Session Moderator: L. S. Luckinbill**
KCEC Grand Ballroom Salon D

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1:15-1:30 111 QTL For Spawning Time And Body Weight In Rainbow Trout: Testing For Conserved Effects Across Ancestral Homeologues
***O'Malley, K., Ferguson, M.M., and Danzmann, R.**
komalley@uoguelph.ca University of Guelph

1:30-1:45 112 On the contribution of dominance to the evolution and mapping of maternal effects
Jason B. Wolf
jwolf@pcg.wustl.edu Washington University School of Medicine

1:45-2:00 113 QTL effects on the size and shape of mandibular molars in mice
Michael Scott Workman, *Larry J. Leamy, Eric J. Routman, and James M. Cheverud
msworkma@bellsouth.net, ljleamy@email.uncc.edu, routman@sfsu.edu, cheverud@pcg.wustl.edu University of North Carolina at Charlotte, University of North Carolina at Charlotte, San Francisco State University, Washington University School of Medicine

2:00-2:15 114 Rapid Mapping of QTLs for Longevity in *Drosophila melanogaster* using AFLPs
***Luckinbill, L. S. and Golenberg, E. M.**
lluckin@biology.biosci.wayne.edu egolen@biology.biosci.wayne.edu Biological Sciences, Wayne State University, Detroit MI, 48202

2:15-2:30 115 QTL analysis of a cuticular hydrocarbon difference between two *Drosophila* species
Gleason, J.M.
jennifer.gleason@yale.edu School of Biology, University of St. Andrews, St. Andrews, Scotland and Department of Ecology and Evolutionary Biology, Yale University, New Haven, CT

2:30-2:45 116 Quantitative genetic analysis of sexually dimorphic characters in *Drosophila melanogaster*.
***Graze, R.M. , Kopp, A., Nuzhdin, S.V.**
rmgraze@ucdavis.edu Section of Evolution & Ecology, University of California, Davis, Davis,CA; Molecular Biology, University of Wisconsin-Madison, Madison, WI; Section of Evolution & Ecology, University of California, Davis, Davis, CA

2:45-3:00 117 Genetics of Species differences between two Hawaiian Picture-winged species.
***Price, D. K., Muir, C., Moore, S., Flesher, D. and Lang, H.**
donaldp@hawaii.edu University of Hawaii at Hilo

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#20 Viral evolution **Session Moderator: S. N. Bennett**
UT Conference Center Room 406

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1:15-1:30 118 Host range evolution in bacteriophage of Bacillus: influence of host phylogeny.
***Krukonis, Gregory P. & Cohan, Frederick M.**
greg@krukonis.com fcohan@wesleyan.edu Wesleyan University

1:30-1:45 119 An Experimental Study in Viral Evolution: Virulence & Mode of Transmission
***Stewart, A. D., Kelley, S. E. & Logsdon, J.**
adstewa@emory.edu Emory University

1:45-2:00 120 rtREV: a general substitution model for inference of retrovirus and reverse transcriptase phylogeny
***Dimmic, M.W.; Rest, J.S.; Mindell, D.P., and Goldstein, R.A.**
mdimmic@umich.edu, jrest@umich.edu, mindell@umich.edu, richardg@umich.edu Biophysics Research Division, Ecology and Evolutionary Biology, Museum of Zoology, and Department of Chemistry all at University of Michigan

2:00-2:15 121 The distribution of mutational effects in the RNA virus phi-6 depends on distance from a fitness optimum
***Burch, Christina L. & Chao, Lin**
cburch@princeton.edu, lchao@biomail.ucsd.edu Princeton University; University of California, San Diego

2:15-2:30 122 Evolutionary Jerks in Dengue 4 from Puerto Rico
***S. N. Bennett+, A. V. Vorndham, E. C. Holmes, W. O. McMillan+**
sbennett@rrpac.upr.clu.edu, wmcmilla@rrpac.upr.clu.edu
+Dept. de Biologia, Universidad de Puerto Rico--Rio Piedras; Center for Disease Control, Dengue Branch, San Juan Puerto Rico; Oxford University

2:30-2:45 123 Molecular Genetic Evidence of HIV-1 Adaptation to Antibody Surveillance
da Silva, J.
dasilvaj@mail.ecu.edu Department of Biology, East Carolina University

2:45-3:00 124 New evidence for extensive recombination in HIV-1 group M: implications for evolutionary inference
§*Michael Worobey, Andrew Rambaut, David Robertson
michael.worobey@zoo.ox.ac.uk Department of Zoology, University of Oxford

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Wednesday late afternoon: 3:30pm to 5pm
Symposium SSE: Education, Continued **UT Conference Center 413 ABC**

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#21 QTL studies **Session Moderator: M. C. Ungerer**
KCEC Grand Ballroom Salon A

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3:30-3:45 125 Selection on life history traits in recombinant inbred lines of *Arabidopsis thaliana* in the field
***Y. Toyonaga, C. Weinig, N. Kane, L. Dorn, and J. Schmitt**
Yuko_Toyonaga@brown.edu Brown University

3:45-4:00 126 Selection at specific loci: QTL for fitness in *Arabidopsis thaliana* in the field
***Schmitt, J., Weinig, C., Dorn, L., Kane, N., Toyonaga, Y., & Purugganan, M.**
Johanna_Schmitt@brown.edu Brown University, Brown University, Brown University, Brown University, Brown University, North Carolina State University

4:00-4:15 127 Mapping *Arabidopsis thaliana* QTLs for morphological and life history traits in two photoperiod environments
***Ungerer, M.C., Halldorsdottir, S., Purugganan, M.D. & Mackay, T.F.C.**
mcungere@unity.ncsu.edu sshalldo@unity.ncsu.edu michaelp@unity.ncsu.edu mackay@unity.ncsu.edu Department of Genetics, North Carolina State University, Raleigh, North Carolina, 27695-7614

4:15-4:30 128 Identification and characterization of QTLs contributing to postyzygotic reproductive isolation between two species of *Mimulus*
***Fishman, L. and Willis, J.**
lfishman@duke.edu Biology Dept., Duke University

4:30-4:45 129 Diversifying selection among maize landraces (morphological traits and pathogen related resistance genes).
***Pressoir, G. & Berthaud, J.,**
GPressoir2@CIMMYT.EXCH.CGIAR.ORG, JBerthaud@CIMMYT.EXCH.CGIAR.ORG CIMMYT - IRD, Applied Biotechnology, Apdo Postal 6-641, 06600 Mexico D.F., Mexico

4:45-5:00 130 Evolvability of *Dalechampia* blossoms
***Hansen, T. F., Armbruster, W. S., Carlson, M. & Pelabon, C**
thomas.hansen@bio.fsu.edu Florida State University, University of Trondheim, University of Trondheim, University of Trondheim

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#22 Social evolution **Session Moderator: B. Crespi**
UT Conference Center Room 406

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3:30-3:45 131 Genetic conflict and conditional altruism in social aphid colonies
***Patrick Abbot, Jay H. Withgott, Nancy A. Moran**
abbot@u.arizona.edu, withgott@pacbell.net, nmoran@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721

3:45-4:00 132 Information flow and collective decision-making during nest site selection by the ant *Leptothorax albipennis*
***Pratt, S. C., Mallon, E. B., Sumpter, D. J. T., Franks, N. R.**
spratt@post.harvard.edu Department of Biology and Biochemistry, University of Bath, Experimental Ecology, ETH Zurich; Centre for Mathematical Biology, Oxford University, School of Biological Sciences, Bristol University

4:00-4:15 133 Alternative female reproductive strategies in the weakly eusocial sweat bee, *Halictus sexcinctus*
Richards, M.H.
mrichard@spartan.ac.brocku.ca Dept. Biological Sciences, Brock University, St. Catharines, Ontario L2S 3A1 Canada

4:15-4:30 134 The origin and maintenance of unicoloniality in the invasive Argentine ant (*Linepithema humile*)
Tsutsui, N. D.
ndtsutsui@ucdavis.edu Center for Population Biology, Section of Evolution and Ecology, University of California, Davis

4:30-4:45 135 Eastern tent caterpillar egg mass dispersion and its effects on colony genetic structure
***Costa, J.T. & McGuirt, R.**
costa@wcu.edu, Rom5991@cs.com Department of Biology, Western Carolina University, Cullowhee, NC 28723

4:45-5:00 136 The Evolution of Reproductive Skew in Social Thrips and Other Animals: Alternative Routes to the Origins of Soldiers and Workers
Chapman, T. W., Kranz, B. D., Bejah, K., Morris, D., Schwarz, M. P. & *Crespi, B. J.
bitwc@flinders.edu.au (Chapman), konken@nodai.ac.jp (Kranz), David.Morris@ento.csiro.au (Morris), Michael.Schwarz@flinders.edu.au (Schwarz), crespi@sfu.ca (Crespi) Flinders University of South Australia (Chapman, Bejah, and Schwarz), Tokyo University of Agriculture (Kranz), CSIRO Entomology Canberra (Morris) & Simon Fraser University (Crespi)

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#23 Biogeography/geographic variation of arthropods Session Moderator: D. C. Marshall
KCEC Grand Ballroom Salon B

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3:30-3:45 137 Oedionychine flea beetle phylogeny: are preconceived notions of character fidelity and biogeography fooling taxonomists?
***Duckett, C.N. & Kjer, K.M.**
catherineduckett@hotmail.com, kjer@aesop.rutgers.edu Universidad de Puerto Rico, Departamento de Biologia, San Juan, Puerto Rico, 00931-3360. Rutgers University, Department of Entomology, New Brunswick, N.J. 08901.

3:45-4:00 138 Life-cycle evolution and speciation in periodical cicadas: Inferences from distributional patterns in space and time
Marshall, D. C.
david.marshall@uconn.edu Dept. of Ecology and Evolutionary Biology, University of Connecticut

4:00-4:15 139 Does diet breadth affect population structure in generalist/specialist sister species of seed beetles (Coleoptera: Chrysomelidae: Bruchinae: Stator)?
§*Morse, G.E. & B.D. Farrell
gmorse@oeb.harvard.edu, bfarrell@oeb.harvard.edu Museum of Comparative Zoology, Harvard University

4:15-4:30 140 On the importance of the ontogenetic niche in resource-associated divergence: evidence from a polyphagous grasshopper
***Dopman, E., Sword, G., and Hillis, D.**
ebd5@cornell.edu (first author) Department of Ecology and Evolutionary Biology, Cornell University, Ithaca, NY; (second) USDA/ARS Sidney, MT (third) Section of Integrative Biology, University of Texas, Austin, TX

4:30-4:45 141 Phylogeny and historical biogeography of the damselfly genus *Ischnura*
§*Morgan, J., Robinson, J.V, and Chippindale, P.T.
evobiogirl@bigfoot.com University of Texas at Arlington (all authors)

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#24 Biogeography/geographic variation of mammals **Session Moderator: Jay Storz**
KCEC Grand Ballroom Salon C

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3:30-3:45 142 Biogeography of bottlenose dolphins in the Northwest Atlantic inferred from genetic data
***Rosel, P.E.& Hansen, L**
patricia.rosel@noaa.gov NOAA/National Marine Fisheries Service

3:45-4:00 143 Molecular Dating and Biogeography of the Early Placental Mammal Radiation
***Eizirik, E., Murphy, W.J. & O'Brien, S.J.**
eizirike@mail.ncifcrf.gov Laboratory of Genomic Diversity, National Cancer Institute, NIH

4:00-4:15 144 Molecular Systematics and Biogeography of Howler Monkeys (Genus *Alouatta*)
***Cortes-Ortiz, L; Bermingham, E.; Rico, C.; Ruiz-Garcia, M.; Sampaio, I. & Rodriguez-Luna, E.**
cortesl@naos.si.edu University of Est Anglia, Smithsonian Tropical Research Institute, University of Est Anglia, Pontificia Universidad Javeriana, Universidad Federal do Para, Universidad Veracruzana

4:15-4:30 145 Contrasting patterns of divergence in quantitative traits and neutral DNA markers: analysis of clinal variation
***Storz, Jay F.**
storz@duke.edu Department of Biology, Duke University

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#25 Combined data systematics **Session Moderator: J. Shultz**
KCEC Grand Ballroom Salon D

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3:30-3:45 146 Combined Morphological and Molecular Analysis of Arachnid Phylogeny
***Shultz, J.W. & Regier, J.C.**
js314@umail.umd.edu, regier@glue.umd.edu Department of Entomology, University of Maryland, College Park; Center for Agricultural Biotechnology, University of Maryland Biotechnology Institute

3:45-4:00 147 Lake Baikal Amphipods: Molecular and Morphological Evolution
***Macdonald, K. & Duffy, J. E.**
tripp@vims.edu Virginia Institute of Marine Science, College of William and Mary, Gloucester Pt. VA, 2302

4:00-4:15 148 Are our louse phylogenies really lousy?
***Isabel Marshall, Kevin Johnson, Rob Cruikshank and Vince S. Smith**
I.Marshall@udcf.gla.ac.uk; kjohnson@inhs.uiuc.edu; rhc3d@udcf.gla.ac.uk; VSmithuk@yahoo.co.uk University of Glasgow (Scotland); Illinois Natural History Survey, Champaign, IL, University of Glasgow, University of Glasgow

4:15-4:30 149 Talk Cancelled

4:30-4:45 150 Molecular and morphological Phylogenetics of the Caribbean Gorgonian Corals: On the Evolution of Colony Architecture in Modular Organisms.
§*Sanchez, J.A. & Lasker, H.
jsanchez@buffalo.edu ; hlasker@buffalo.edu, Department of Biological Sciences, 109 Cooke Hall, State University of New York at Buffalo, Buffalo, NY 14260, USA

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#26 Speciation **Session Moderator: Bruce Turner**
Holiday Inn Tennessee Ballroom

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3:30-3:45 151 Correlated evolution of morphology and vocal performance in Darwin's finches
Podos, J.
jpodos@bio.umass.edu University of Massachusetts, Amherst

3:45-4:00 152 Mode and tempo of speciation
Fitzpatrick, B.M.
benfitz@ucdavis.edu Population Biology Graduate Group; Section of Evolution and Ecology; University of California; Davis, CA 95616

4:00-4:15 153 Sources and pools: local differentiation in presence of gene flow
***Bjorklund, M., Borras, A. & Senar, JC.**
mats.bjorklund@ebc.uu.se, jcsenar@lix.intercom.es Department of AnimalEcology, Evolutionary Biology Centre, Uppsala University, Sweden; Museo Zoologia, Barcelona, Spain

4:15-4:30 154 The Genetic Basis of Speciation: Differential Introgression of X-linked Loci Across a European House Mouse Hybrid Zone
***Payseur, B. A., Nachman, M. W.**
payseur@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

4:30-4:45 155 Cryptic Speciation
Lee, Carol Eunmi
carollee@facstaff.wisc.edu University of Wisconsin, Madison

4:45-5:00 156 The genetic imprint of speciation in Darwin's finches?
***Petren, K., Grant, B. R. & Grant, P. R.**
ken.petren@uc.edu University of Cincinnati; Princeton University; Princeton University

5:00-5:15 157 A Young Species Flock of Pupfishes from San Salvador Island: Evidence for Reproductive Isolation Among Ecomorphs
***Bunt, T, Turner, B.J., Duvernell, D., Holtmeier, C & Barton, M.**
fishgen@vt.edu Dept. Biology, VPISU; Dept. Biology, DePaul University; Dept. Biol. Science, Centre College

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5:30-6:30 SSB Presidential Address: David Maddison **KCEC Grand Ballroom**
"An inordinate fondness for beetle phylogenies"

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7:30 to 10:00 **Poster session** **Exhibit Hall #2**

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9:00-10:30 p.m. **WGBH Film preview of series on Evolution** **UTCC Room 413ABC**
Sponsored by Education section

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THURSDAY SYMPOSIA AND CONTRIBUTED PAPERS

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#27 Symposium NSF: Evolutionary and Ecological Functional Genomics

Organizer: M. Feder

UT Conference Center Room 413 ABC

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8:00 - 8:15 158 What is evolutionary and ecological functional genomics?
Martin E. Feder
m.feder@uchicago.edu, The University of Chicago

8:15 - 8:45 159 Genomic analysis of experimental evolutionary studies
Albert F. Bennett
abennett@uci.edu, University of California, Irvine

8:45 - 9:15 160 Evolutionary genomics - a new way of viewing organisms in their adaptive landscape: Lessons from yeast.
B. Dunn[1], Pugh, T.[2], Zeyl, C.[3], Brauer, M.[4], Brown, P.[1], Botstein, D.[4] and *F. Rosenzweig[5]
rrosenzw@ufl.edu, [1] Dept of Biochemistry, Stanford University School of Medicine, Stanford, CA [2] Miller Brewing Co., Milwaukee, WI [3] Dept of Biology, Wake Forest University, Winston-Salem, NC [4] Dept of Genetics, Stanford University School of Medicine, Stanford, CA [5] Dept of Mol Genetics and Microbiology, University of Florida, Gainesville, FL

9:15 - 9:45 161 High-throughput studies on ecological, environmental and evolutionary genomics. An emerging model for industrial-academic partnerships
Robert A. Feldman*, Ph.D., Ed DeLong, Carl Woese, Craig Cary, Horst, Felbeck, Jeff Stein
Robert.Feldman@am.apbiotech.com, Amersham Pharmacia Biotech; Monterey Bay Aquarium Research Inst.; Univ. of Illinois; Univ. of Delaware; Univ. of Cal. San Diego; Quorex Pharm.

10:30 - 11:00 162 Evolutionary genomics in natural populations: from QTL to gene function and back again
Patrick C. Phillips
pphil@darkwing.uoregon.edu, University of Oregon

11:00 - 11:30 163 Evolution of Pathogen Resistance Genes: Genomic Biogeography
May, G.*, Baumgarten, A., Spangler, R
gmay@marson.tc.umn.edu, U. Minnesota

11:30 - 12:00 164 Ecological functional genomics: using real ecology to reveal real function
Wayne K. Potts* and Jon Seger
potts@biology.utah.edu, University of Utah

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#28 Biogeography/geographic variation of arthropods

Session Moderator: P. H. Barber

KCEC Grand Ballroom Salon B

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8:00-8:15 165 The effects of population extinction on Interspecific patterns of genetic variation: Insights provided by DNA from museum specimens
Williams, B.L.
bwillims@students.uiuc.edu Department of Animal Biology, University of Illinois, Urbana, IL 61801

8:15-8:30 166 Patterns of divergence among ghost shrimp populations in the northern Gulf of Mexico
***Bilodeau, A.L. and Neigel, J.E.**
bilodeau@biol.sc.edu, jneigel@louisiana.edu University of Louisiana at Lafayette, University of South Carolina ; University of Louisiana at Lafayette

8:30-8:45 167 Adaptive genetic response to global warming
***Bradshaw, W. & Holzapfel, C.**
wyomya@aol.com Department of Biology, University of Oregon, Eugene, OR 97403-1210

8:45-9:00 168 Nested clade analysis of habitat islands and geographic variation in Pacific black flies
***Joy, D. and Conn, J.**
dajoy@zoo.uvm.edu University of Vermont

9:00-9:15 169 The evolution of inversion frequencies in the New World invasions of *Drosophila subobscura*
***Gilchrist, G. W., Serra, L., Balanya, J., & Huey, R. B.**
gilchrgw@clarkson.edu Clarkson University, University of Barcelona, University of Barcelona, University of Washington.

9:15-9:30 170 Physical and ecological limits to dispersal among coral reef stomatopod populations
Barber, P.H.
pbarber@oeb.harvard.edu Dept. Organismic and Evolutionary Biology, Harvard University

9:30-9:45 171 High levels of genetic differentiation in geographically isolated populations of two species of Antarctic Collembola
***Frati F., Summa D., Spinsanti G. & Fanciulli P.P.**
frati@unisi.it Department of Evolutionary Biology, University of Siena, via P.A.Mattioli 4, 53100 Siena, ITALY

9:45-10:00 172 Back to Ki: Declining populations and gene flow in two species of Hawaiian Picture Wing *Drosophila*.
***Muir, C., Foote, D., Flesher, B., Cutler, D., Price, D.**
cmuir@hawaii.edu University of Hawai`i at Hilo, USGS Kilauea Research Station, UHH

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#29 Speciation **Session Moderator: Barry Chernoff**
KCEC Grand Ballroom Salon A

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8:00-8:15 173 Ecological causes of speciation in Timema walking-sticks
***Nosil, P., Crespi, B.J., & Sandoval, C.**
pnosila@sfu.ca, crepsi@sfu.ca, sandoval@lifesci.ucsb.edu Department of Biosciences, Simon Fraser University, Burnaby, B.C. Canada, V5A 1S6 Department of Biosciences, Simon Fraser University, Burnaby, B.C. Canada, V5A 1S6 Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara, CA 93206 USA

8:15-8:30 174 Incipient Speciation of an Intertidal Copepod
Peterson D.
dennispe@usc.edu University of Southern California

8:30-8:45 175 What mtDNA reveals and conceals about speciation in Hawaiian crickets: assessing sympatric versus allopatric ('double invasions') origins
Shaw, K. L.
ks233@umail.umd.edu University of Maryland

8:45-9:00 176 Species and species concepts: a case study
***Chernoff, B., A. C. James, J. W. O. Ballard**
chernoff@fmnh.org; ajames@fmnh.org; ballard@fmnh.org Department of Zoology, Field Museum of Natural History

9:00-9:15 177 Patterns and Processes of Speciation in the "Pinnixids": a Group of Symbiotic Crabs
Harrison, J. Scott
jharriso@usc.edu University of Southern California

9:15-9:30 178 A direct test of the effect of founder events on the evolutionary potential of assortative mating
Regan, J. L.
jennifer.regan@usm.edu Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS 39406

9:30-9:45 179 Interspecific sterility in *Drosophila melanogaster-D. simulans* hybrids
Orr, H.A. & *Masly, J.P.
msly@mail.rochester.edu University of Rochester

9:45-10:00 180 Replicate adaptive radiation in a freshwater amphipod species complex
***Gary A. Wellborn and Richard E. Broughton**
gwellborn@ou.edu, rbroughton@ou.edu Department of Zoology and Biological Station, University of Oklahoma (Wellborn), Biological Survey and Department of Zoology, University of Oklahoma (Broughton)

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#30 Selection experiments **Session Moderator: Troy Hamon**
KCEC Grand Ballroom Salon A

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8:00-8:15 181 Multivariate selection and ecological impacts of multiple predators on prey
***DeWitt, TJ & Langerhans, RB**
tdewitt@tamu.edu Department of Wildlife & Fisheries Sciences, Texas A&M University

8:15-8:30 182 Field tests of competition among diverging sticklebacks.
***Gray, S.M. & Robinson, B.W.**
grays@uoguelph.ca, berenrob@uoguelph.ca Department of Zoology, University of Guelph

8:30-8:45 183 Behavior affects environment affects physiology: complex correlated responses to selection on thermoregulatory nest building
Fabiola A. Baugham, *Jack P. Hayes, & Carol B. Lynch
fabiolabaughman@yahoo.com, jhayes@unr.edu, carol.lynch@colorado.edu Dept. of Biology, Univ. of Nevada, Reno, NV 89557, Dept. of Biology, Univ. of Nevada, Reno, NV 89557, Dept. of EPO Biology, Univ. of Colorado, Boulder, CO 80309

8:45-9:00 184 Interspecific competition and niche width expansion
Bolnick, D. I .
dibolnick@ucdavis.edu Center for Population Biology, University of California, Davis

9:00-9:15 185 Measurement of concurrent selection episodes
Hamon, T.
troy_hamon@nps.gov National Park Service

9:15-9:30 186 Big picture on the small scale: inferences from compiled rates of rapid evolution in the wild
***Kinnison, M.T. & Hendry, A.P.**
michael.kinnison@dartmouth.edu, ahendry@marlin.bio.umass.edu Department of Biological Sciences, Dartmouth College, Hanover, NH 03755; Organismic and Evolutionary Biology Program, University of Massachusetts, Amherst, MA 01003

9:30-9:45 187 Talk Cancelled

9:45-10:00 188 Phenotypic selection in disturbed and undisturbed desert environments
Vanier, C. H. & Thompson, D. B.
vanier@ccmail.nevada.edu University of Nevada Las Vegas Department of Biological Sciences

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#31 Phylogeny based comparative methods **Session Moderator: Douglas Altshuler**
KCEC Grand Ballroom Salon C

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8:00-8:15 189 Phylogenetic signature of adaptive radiation in darters (Actinopterygii: Percidae)
§Near, T.J.
tjnear@ucdavis.edu Center for Population Biology, University of California-Davis

8:15-8:30 190 Talk Cancelled

8:30-8:45 191 A molecular phylogeny of two families of Neotropical forest birds, the puffbirds and jacamars
Witt, Christopher C.
cwitt@lsu.edu Department of Biological Sciences and Museum of Natural Science, Louisiana State University, Baton Rouge, LA 70803

8:45-9:00 192 Evolution of hummingbird flight morphology. I. Phylogenetic framework based on Bayesian inference
***McGuire, J.A. & Altshuler, D.L.**
jmcguire@lsu.edu colibri@uts.cc.utexas.edu Museum of Natural Science, Louisiana State University; Section of Integrative Biology, University of Texas at Austin

9:00-9:15 193 Evolution of hummingbird flight morphology. II. Comparative analysis
§*Altshuler, D.L. & J. A. McGuire
colibri@uts.cc.utexas.edu jmcguire@lsu.edu Section of Integrative Biology, University of Texas at Austin; Museum of Natural Science, Louisiana State University

9:15-9:30 194 Phylogeny, ecological diversification, and community structure in emydid turtles.
§*Stephens, P. & Wiens, J.
Stephens: pstephen+@pitt.edu; Wiens: wiensj@carnegiemuseums.org Stephens and Wiens: Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA Section of Amphibians and Reptiles, Carnegie Museum of Natural History, Pittsburgh, PA

9:30-9:45 195 Talk Cancelled

9:45-10:00 196 Phylogeny, ecophysiology, and the paradox of herbivory in liolaemine lizards
§*Espinoza, Robert E., Wiens, John J., & Tracy, C. Richard
esin_r@unr.edu; wiensj@carnegiemuseums.org; dtracy@biodiversity.unr.edu Section of Amphibians and Reptiles, Carnegie Museum of Natural History & Ecology, Evolution, and Conservation Biology, University of Nevada, Reno; Section of Amphibians and Reptiles, Carnegie Museum of Natural History; Ecology, Evolution, and Conservation Biology & Biological Resources Research Center, University of Nevada, Reno

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#32 Molecular systematics **Session Moderator: R. W. DeBry**
Holiday Inn Tennessee Ballroom

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8:00-8:15 197 Transmission patterns of rabies viruses in bats: cross-species transmission and its impact on U.S. human rabies cases
***Messenger, S., Smith, J., Orciari, L. & Rupprecht, C.**
smessenger@vetmed.lsu.edu, jss1@cdc.gov

8:15-8:30 198 Taxon sampling, alignment and the tree of the ciliated protists
***Lipscomb, Diana and Bowditch, Brunella**
biodl@gwu.edu George Washington University, Washington D.C., Trinity College, Washington D.C.

8:30-8:45 199 Do multiple likelihood optima in parameter space hinder tree searches?
***Zwickl, D. J.; Swofford, D. L.; Holder M. T.**
zwickl@mail.utexas.edu University of Texas, Department of Integrative Biology; Laboratory of Molecular Systematics, Smithsonian Institution; University of Texas, Department of Integrative Biology

8:45-9:00 200 The impact of recombination in phylogenetic accuracy and its detection from DNA sequences
§Posada, D.
david.posada@byu.edu Department of Zoology, Brigham Young University, Provo, UT 84602

9:00-9:15 201 Some tidbits about the behavior of parsimony under a molecular clock
DeBry, R. W.
ron.debry@uc.edu Department of Biological Sciences University of Cincinnati

9:15-9:30 202 Comparative performance of the bootstrap and Bayesian MC sampling in estimation nodal support: A simulation study
***Alfaro, M., Zoller, S., and Lutzoni, F.**
malfaro@fieldmuseum.org Field Museum, Chicago

9:30-9:45 203 Limitations of Relative Apparent Synapomorphy Analysis (RASA) for measuring phylogenetic signal
***Randle, C. P., Simmons, M.P., Freudenstein, J.V., & Wenzel, J.W.**
randle.9@osu.edu, mps.14@cornell.edu, freudenstein.1@osu.edu, jww+@osu.edu The Ohio State University, Department of Evolution, Ecology and Organismal Biology, 1735 Neil Ave. Columbus, OH 43210; The Ohio State University, Department of Evolution, Ecology and Organismal Biology, Herbarium, 1315 Kinnear Rd., Columbus, OH 43212; The Ohio State University, Department of Evolution, Ecology and Organismal Biology, Herbarium, 1315 Kinnear Rd., Columbus, OH 43212; The Ohio State University, Department of Entomology, 1315 Kinnear Rd., Columbus, OH 43212

9:45-10:00 204 Probabilistic Reconstruction: Branch Support and Number of Gene Trees Needed
Richard H. Zander
rzander@sciencebuff.org Buffalo Museum of Science, Buffalo, New York

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#33 Evolution of host/parasite interactions **Session Moderator: Michael R. Golinski**
KCEC Grand Ballroom Salon D

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8:00-8:15 205 Theoretical and empirical evidence for mutualism in a luminescent bacterium – squid host symbiosis
***Golinski,M.R. & M.K. Nishiguchi**
zipzip_1999@yahoo.com, nish@nmsu.edu Department of Biology, New Mexico State University

8:15-8:30 206 Comparative Population Structure of Yarrow's Spiny Lizard (*Sceloporus jarrovii*) and its Malarial Parasite (*Plasmodium chiricahuae*) in Southern Arizona
Kaplan, M.E.
mkaplan@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721

8:30-8:45 207 Inbreeding and parasite resistance; linking genetics, physiology and behavior
***Heath,B.D.& Polak,M.**
BDHEATH72@hotmail.com Department of Biological Sciences, University of Cincinnati

8:45-9:00 208 Genetic architecture of disease resistance in *Arabidopsis thaliana*
Kover, P. X.
Kover@biology.wustl.edu Washington University

9:00-9:15 209 Maintenance of cooperation in endosymbioses with horizontal transmission
Wilcox, T. P.
tpwilcox@mail.utexas.edu Integrative Biology, University of Texas

9:15-9:30 210 Parasite Transmission Modes and the Evolution of Virulence
Day, T.
dayt@zoo.utoronto.ca Department of Zoology, University of Toronto

9:30-9:45 211 Within host dynamics of microparasites and the evolution of parasite virulence: can we predict the direction of parasite evolution?
***Ganusov, V., Bergstrom, C., Antia, R.**
vganuso@emory.edu Emory University, Biology department, Population biology, ecology and evolution program

9:45-10:00 212 Long-term Evolution of Predicted Cytotoxic T Cell Epitopes of Dengue and Related Viruses
Hughes, A.L.
austin@biol.sc.edu Department of Biological Sciences, University of South Carolina, Columbia SC 29208

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Thursday late morning 10:30 to 12

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Symposium NSF: Evolutionary and ecological functional genomics: continued
UT Conference Center 413ABC

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#34 Biogeography/geographic variation **Session Moderator: M. J. Hickerson**
KCEC Grand Ballroom Salon D

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10:30-10:45 213 Evolutionary radiation of stickleback from the Queen Charlotte Islands
Reimchen, T. E
reimchen@uvic.ca Dept of Biology, University of Victoria, Canada

10:45-11:00 214 Quaternary population history of intertidal pricklebacks (Stichaeidae) according to a coalescent-based analysis of multilocus DNA sequence data
§Hickerson, M.J.
mjh2@acpub.duke.edu Duke University Duke University

11:00-11:15 215 Fishes and Birds: Passengers on Gondwana Life Rafts?
Briggs, J.C.
jbriggs@arches.uga.edu University of Georgia

11:15-11:30 216 Regional patterns of body size in North American freshwater fishes: Bergmann's rule, temperature, and species richness
Knouft, J. H.
knouft@mail.inhs.uiuc.edu Center for Biodiversity, Illinois Natural History Survey and Department of Animal Biology, University of Illinois, Urbana-Champaign

11:30-11:45 217 Historical Biogeography of galaxiid fishes
§*Gustavo Ybazeta and Allan Baker
gybazeta@zoo.utoronto.ca allanb@rom.on.ca Dept. of Zoology – University of Toronto, Centre for Biodiversity and Conservation Biology – Royal Ontario Museum

11:45-12:00 218 Phylogenetic sorting of Utah chub populations isolated by hydrological events of Pleistocene Lake Bonneville: concordance between geology and phylogeny.
Johnson, Jerald B.
jerry.johnson@noaa.gov National Research Council--NMFS

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#35 Ecological genetics **Session Moderator: Eli Stahl**
Holiday Inn Tennessee Ballroom

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10:30-10:45 219 Variation in Physiology and Life History among *Arabidopsis thaliana* ecotypes: ecological and genetic correlations
***McKay, J. K., Richards, J. H. & Mitchell-Olds, T.**
jmckay@selway.umt.edu, jhrichards@ucdavis.edu, tmo@ice.mpg.de
Division of Biological Sciences, University of Montana Land, Air and Water Resources, UC Davis Max-Planck-Institute for Chemical Ecology, Jena Germany

10:45-11:00 220 Selection analyses of *Arabidopsis thaliana:* influences of herbivory
***Courtney Murren and Massimo Pigliucci**
cmurren@utk.edu; pigliucci@utk.edu
Depts. of Botany and Ecology and Evolution at the University of Tennessee

11:00-11:15 221 Reducing bias in estimates of natural selection: addressing the problem of spurious environmental correlates
***Scheiner, S. M., Mazer, S. J., Wolfe, L. M., Dorn, L. A., Donohue, K., Schmitt, J. H.**
sscheine@nsf.gov; mazer@lifesci.ucsb.edu; wolfe@gasou.edu; Lisa Dorn@Brown.edu; kdono2@pop.uky.edu, Johanna_Schmitt@brown.edu
National Science Foundation, University of California - Santa Barbara, Georgia Southern University, Brown University, University of Kentucky, Brown University

11:15-11:30 222 The cost and benefit of a disease-resistance allele in *Ipomoea purpurea*
Kniskern, Joel
jmk8@duke.edu Duke University

11:30-11:45 223 Evolutionary history of *Arabidopsis* disease resistance locus Rpm1
***Stahl, E. A., M. Kreitman and J. Bergelson**
elistahl@midway.uchicago.edu University of Chicago Dept. of Ecology and Evolution

11:45-12:00 224 Additive and nonadditive genetic variation for herbivory tolerance and host plant quality in *Mimulus guttatus - Philaenus spumarius* interactions
***Ivey, C. T., Carr, D. E., and Eubanks, M. D.**
cti3c@virginia.edu; dec5z@virginia.edu; meubanks@acesag.auburn.edu
C. T. Ivey, Blandy Experimental Farm, University of Virginia, 400 Blandy Farm Lane, Boyce, VA 22620; D. E. Carr, Blandy Experimental Farm, University of Virginia, 400 Blandy Farm Lane, Boyce, VA 22620; M. D. Eubanks, Department of Entomology and Plant Pathology, Auburn University, Auburn, AL 36849

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#36 Evolution of behavior **Session Moderator: David A. Lytle**
KCEC Grand Ballroom Salon A

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10:30-10:45 225 Behavioral adaptations increase the value of enemy-free space
***Oppenheim, S. J. & Gould, F.**
sara_oppenheim@ncsu.edu, fred_gould@ncsu.edu North Carolina State University

10:45-11:00 226 Reconstructing the evolution of eusociality in halictid bees: few origins, multiple reversals.
Danforth, B.N.
bnd1@cornell.edu Department of Entomology, Comstock Hall, Cornell University, Ithaca, NY 14853

11:00-11:15 227 Genetic consequences of natural selection on mate recognition in *Drosophila serrata*
***Blows, MW & Higgie, M**
mblows@zoology.uq.edu.au Department of Zoology & Entomology, University of Queensland, St Lucia, Brisbane, QLD 4072 Australia

11:15-11:30 228 The reinforcement of mate recognition by natural selection in *Drosophila serrata*
***Higgie, M, Chenoweth, S, Blows, MW**
mhiggie@zoology.uq.edu.au Department of Zoology & Entomology, University of Queensland, St Lucia, Brisbane, QLD 4072, Australia

11:30-11:45 229 Adaptation, or random change? The evolutionary response of song phenotype to substrate properties in green lacewings.
***Henry, C. S. & Wells, M. M.**
chenry@uconnvm.uconn.edu & martam@uconnvm.uconn.edu Department of Ecology & Evolutionary Biology, University of Connecticut, Storrs, CT 06269

11:45-12:00 230 Evolution of flood avoidance behaviors in the giant water bugs: adaptation and exaptation
***Lytle, David A. & Smith, Robert L.**
dalytle@ag.arizona.edu University of Arizona, Department of Entomology, Tucson, AZ 85721

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#37 Hybridization **Session Moderator: M. Blum**
KCEC Grand Ballroom Salon C

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10:30-10:45 231 Rapid motion of a *Heliconius* hybrid zone
Blum, Michael J.
mjblum@duke.edu Duke University, Dept. of Biology and Smithsonian Tropical Research Institute

10:45-11:00 232 An AFLP map for studying introgression between sympatric, hybridizing *Colias* butterflies
***Wang, B. & Porter, A.**
bwang@nsm.umass.edu Graduate Program in Organismic and Evolutionary Biology & Department of Entomology, University of Massachusetts, Amherst MA 01003-9320

11:00-11:15 233 Evolution of wing pigmentation patterns in flies: divergence and hybridization
***Brown, J.M. and Cooper, I.**
brownj@grinnell.edu Biology Department, Grinnell College

11:15-11:30 234 Time, space, and population genetics in the *Allonemobius fasciatus* -- *A. socius* mosaic hybrid zone.
***Britch, S.C. & Howard, D.J.**
sbritch@nmsu.edu New Mexico State University, Department of Biology, MSC 3AF, Las Cruces, NM 88003 USA

11:30-11:45 235 Assessing the Role of Hybridization in the Invasion of the Rusty Crayfish, *Orconectes rusticus*, in Northern Wisconsin and Michigan.
***Perry, W.L., Feder, J.L., Lodge, D.M., & Dwyer, G.**
wlperry@ilstu.edu, jeffrey.l.feder.2@nd.edu, david.m.lodge.1@nd.edu, gdwyer@midway.uchicago.edu Illinois State University, University of Notre Dame, University of Notre Dame, University of Chicago

11:45-12:00 236 Avian predators in a *Heliconius* hybrid zone: a comparison of two transects
Langham, G.
GML4@cornell.edu Dept. of Ecology and Evolutionary Biology, Cornell University, Ithaca, NY

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#38 Speciation **Session Moderator: N. A. Johnson**
KCEC Grand Ballroom Salon B

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10:30-10:45 237 Dynamics of parapatric speciation
Gavrilets, S.
gavrila@tiem.utk.edu Department of Ecology and Evolutionary Biology, Department of Mathematics, University of Tennessee, Knoxville

10:45-11:00 238 Some Distance and Balance Properties of A Simple Speciation Model
***McKenzie, A. & Steel M.**
a.mckenzie@math.canterbury.ac.nz, m.steel@math.canterbury.ac.nz Biomathematics Research Centre, University of Canterbury, Christchurch, New Zealand

11:00-11:15 239 Population Genetic Models of Meiotic Drive as a Cause of Hybrid Sterility
Adams, C.
curtadams@aol.com University of California, Riverside

11:15-11:30 240 Evolution with regulatory genetic pathways: Branched pleiotropic pathways, G matrices, and speciation
***Johnson, N. A. & Porter, A. H**
njohnson@ent.umass.edu, aporter@ent.umass.edu Department of Entomology and Program in Organismic and Evolutionary Biology, University of Massachusetts- Amherst

11:30-11:45 241 A Modern Perspective of Adaptive Landscapes: What's Left of Wright?
***Stone, J. & Bjorklund, M.**
jon.stone@evolution.uu.se & Mats.Bjorklund@ebc.uu.se Animal Ecology, Uppsala University & Animal Ecology, Uppsala University

11:45-12:00 242 Putting History Back into Speciation Analysis
Cracraft, Joel
jlc@amnh.org Department of Ornithology, American Museum of Natural History, Central Park West at 79th Street, New York NY 10024

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#39 Phylogeography **Session Moderator: A. Storfer**
UT Conference Center Room 406

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10:30-10:45 243 Phylogeography, species boundaries, and hybridization among toads of the *Bufo americanus* group
***Masta, S., B. Sullivan, E. Gergus, T. Lamb, and E. Routman**
smasta@sfsu.edu San Francisco State University, Arizona State University West, Glendale Community College, East Carolina University, San Francisco State University

10:45-11:00 244 Systematics and phylogeography of salamanders of the *Eurycea multiplicata* complex
§*Bonett, R. M. & Chippindale, P. T.
desmog_2000@yahoo.com; paulc@uta.edu Department of Biology, University of Texas at Arlington, Arlington, TX 76019

11:00-11:15 245 Phylogeography of the Western Toad (*Bufo boreas*) in California
***Stephens, M. R., Shaffer, H.B., & Girman, D.J.**
stephenm@students.sonoma.edu; hbshaffer@ucdavis.edu, girman@sonoma.edu Sonoma State University, University of California, Davis, Sonoma State University

11:15-11:30 246 Test of Pleistocene Refugia Theory: Phylogeographic Analysis of a high-elevation salamander in the southern Appalachians
Crespi, E. J. & *Rissler, L. J.
rissler@uclink.berkeley.edu University of Virginia, University of California at Berkeley

11:30-11:45 247 Molecular Phylogenetic Evidence for Mullerian Mimicry in Peruvian Poison Frogs
§*Symula, R., Schulte, R. and Summers, K.
summersk@mail.ecu.edu Department of Biology, East Carolina University, Greenville, NC 27858 (authors 1 and 3) INIBICO, Tarapoto, Peru (author 2)

11:45-12:00 248 Phylogeography, local adaptation and habitat shifts of two sister salamander taxa
***Storfer, A. & Niedzwiecki, J**
storfera@wec.ufl.edu; j_niedzwiecki@hotmail.com Andrew Storfer Wildlife Ecology and Conservation University of Florida Gainesville, FL 32611; John Niedzwiecki Center for Ecology, Evolution and Behavior University of Kentucky 101 T. H. Morgan Bldg. Lexington, KY 40506-0225

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Thursday early afternoon 1:15pm to 3pm

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#40 Symposium ASN: Young Investigator & SSE Dobzhansky award recipients
Organizer: Olle Pellmyr

UT Conference Center 413ABC

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1:15 - 1:30 249 Introduction **Olle Pellmyr**
Vanderbilt

1:30 - 2:00 250 Adaptive divergence and the evolution of reproductive isolation: an empirical demonstration in nature.
Andrew Hendry
Univ of Massachusetts, Amherst

2:00 - 2:30 251 Genetic polymorphisms, sexual selection and the unevenness of speciation rates among African cichlids
Ole Seehausen
University of Southampton, UK, and Univ of Leiden, The Netherlands

2:30 - 3:00 252 Diversity maintenance in patchy environments: empirical and theoretical perspectives
Priyanga Amarasekare
University of Chicago

3:30 - 4:00 253 Adaptive plasticity in mate preference linked to differences in reproductive effort
Anna Qvarnström
University of Uppsala, Sweden

4:00 - 4:30 254 Modes of speciation in fig pollinators and parasites
George Weiblen
Michigan State University

4:30 - 5:00 255 Rapid divergence in sexual dimorphism in natural bird populations: The role of ontogenetic variation and parental effects
Alex Badyaev (SSE: Dobzhansky Prize Winner)
Department of Biological Sciences, Auburn University

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#41 Genomics **Session Moderator: S. R. Palumbi**
Holiday Inn Tennessee Ballroom

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1:15-1:30 256 Expressing the inner queen: Genomic approaches to social insect caste determination
Evans, J.D.
evansj@ba.ars.usda.gov Bee Research Lab; USDA-ARS BARC East Bldg. 476

1:30-1:45 257 Climatic adaptation in Drosophila: dissecting molecular and quantitative trait clines
***Hoffmann, A. McKechnie, S. Hallas, R. Mitrovski, P. Anderson, A.**
A.Hoffmann@latrobe.edu.au CESAR, La Trobe University, CESAR, Monash University, CESAR, La Trobe University, CESAR, La Trobe University, CESAR, Monash University

1:45-2:00 258 A functional genomic definition of tradeoffs and pleiotropy
Stearns, S.C.
stephen.stearns@yale.edu Department of Ecology and Evolutionary Biology Yale University, New Haven, Connecticut

2:00-2:15 259 Genomics of thermal selection in experimental populations of *Drosophila*
***Rand, D. M., Weinreich, D. M., Gilchrist, G., Huey, R.**
David_Rand@brown.edu Brown University, Brown University, Clarkson University, University of Washington

2:15-2:30 260 Mechanisms of acquired environmental adaptations - a molecular genomic perspective
***Cossins, A.R., A. Gracey and M.X Caddick**
cossins@liv.ac.uk School of Biological Sciences, University of Liverpool

2:30-2:45 261 Genetic basis of adaptive coat-color variation in pocket mice
***Hoekstra, H.E. & Nachman, M.W.**
hopi@u.arizona.edu, nachman@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721

2:45-3:00 262 When genomes collide: the genetics of gamete failure in hybrids and heterozygotes among rapidly speciating sea urchins
Palumbi, S. R.
spalumbi@oeb.harvard.edu Organismic and Evolutionary Biology, Harvard University

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#42 Conservation biology **Session Moderator: J. Etterson**
UT Conference Center Room 406

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1:15-1:30 263 Creating clines in the field to measure dispersal from refuges and manage the evolution of resistance
***Baker, M. B., Porter, A. H. & Ferro, D. N.**
mbbaker@ent.umass.edu, aporter@ent.umass.edu, ferro@ent.umass.edu Entomology, University of Massachusetts, Amherst

1:30-1:45 264 Applying molecular, ecological and paleontological data to characterize change in freshwater mussel populations in NE Ohio
***Krebs, R.A. and Tevesz, M.J.S.**
r.krebs@csuohio.edu The Dept. of Biological, Geological and Environmental Sciences, Cleveland State University

1:45-2:00 265 Constraint to adaptive evolution in response to global warming: A case study from the Great Plains
***Etterson, J. R. Shaw, R. G.**
jre7e@virginia.edu University of Virginia, University of Minnesota

2:00-2:15 266 Genetic variation in rare and widespread *Lomatium* species (Apiaceae): AFLP and nuclear DNA sequence data
***Gitzendanner, M.A. & Soltis, P.S.**
mgitzend@wsu.edu, psoltis@wsu.edu School of Biological Sciences, Washington State University; Florida Museum of Natural History, University of Florida

2:15-2:30 267 Conservation of Genetic Diversity in Wild American Ginseng Under Varying Harvest Regimes
***Cruse, J.M. & Hamrick, J.L**
cruse@dogwood.botany.uga.edu Botany Department, University of Georgia, Athens, GA

2:30-2:45 268 Relative rates of pollen and seed gene flow in the tropical tree *Corythophora alta*
Hamilton, M. B.
hamiltm1@georgetown.edu Georgetown University, Department of Biology, Washington DC 20057 and Biological Dynamics of Forest Fragments Project, Manaus AM Brazil

2:45-3:00 269 High genetic diversity but significant allele impoverishment of fragmented and continuous populations of the Andean oak *Quercus humboldtii* Bonpl.
***Fernandez-M., J.F. & V.L. Sork**
s997022@admiral.umsl.edu, sorkv@admiral.umsl.edu University of Missouri-St. Louis, Department of Biology

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#43 Sexual selection **Session Moderator: Jerry Wilkins**
KCEC Grand Ballroom Salon C

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1:15-1:30 270 Genetic consequences of polyandry in red flour beetles
***Pai, A., Yan, G.**
aditipai@acsu.buffalo.edu, gyan@acsu.buffalo.edu Department of Biological Sciences, State University of New York at Buffalo, NY 14260

1:30-1:45 271 Do Female Spiders Select Heavier Males for the 'Good Genes' they Possess?
***Riechert, S. E. & Johns, P.**
sriecher@utk.edu Department of Ecology & Evolutionary Biology, University of Tennessee; Department of Biology, Swarthmore College

1:45-2:00 272 Multiple mating and meiotic drive in stalk-eyed flies
***Wilkinson, G., Swallow, J., Toll, S., & Fry, C.**
gw10@umail.umd.edu University of Maryland

2:00-2:15 273 Nuptial gifts, female promiscuity and male size evolution
***Fedorka, K. M. & Mousseau, T. A.**
fedorka@sc.edu University of South Carolina

2:15-2:30 274 Song and speciation in crickets
***Gray, D. A. & Cade, W. H.**
dave.gray@uleth.ca Biological Sciences, The University of Lethbridge

2:30-2:45 275 Distinguishing among patterns of sexual selection by comparing two derived populations of the jumping spider *Habronattus pugillis*
***Hebets, E. A. & Maddison, W. P.**
ehebets@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

2:45-3:00 276 Climbing to reach females: Romeo should be small
***Jordi Moya-Laraño, Juraj Halaj, David H. Wise**
jmoya2@pop.uky.edu, jhalaj@home.com, dhwise@pop.uky.edu, University of Kentucky

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#44 Population genetics **Session Moderator: C. Hill**
KCEC Grand Ballroom Salon A

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1:15-1:30 277 Low polymorphism of cross-amplified microsatellite DNA loci in seaside sparrows: artifact or genetic impoverishment?
Hill, C.
chill@coastal.edu Department of Biology, Coastal Carolina University

1:30-1:45 278 Phylogeography and conservation genetics of an endangered marine fish, the barndoor skate, *Dipturus laevis*
***Stoner, D. S.^, Christopher M. Anderson^, Emily Hoppmann^, Todd Gedamke#, William D. Dupaul#, Ransom A. Myers$ and Joseph M., Quattro J. M.^**
^Department of Biological Sciences, University of South Carolina, Columbia, SC 29208; #Virginia Institute of Marine Science, Gloucester Point, VA 23062, $Department of Biology, Dalhousie University, Halifax, Nova Scotia Canada B3H 4J1 dsstoner@biol.sc.edu

1:45-2:00 279 Gene flow patterns in *Gambusia holbrooki* from the Florida Everglades: A comparison of Fst and coalescence-based maximum-likelihood estimates
***McElroy, T.C. & Trexler, J.C.**
mcearthworm@aol.com, trexlerj@fiu.edu Florida International University

2:00-2:15 280 Genetic effective size is several orders of magnitude lower than census size in an abundant marine fish.
Turner, T. F.
turnert@unm.edy Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131

2:15-2:30 281 Contrasting patterns of mitochondrial and nuclear gene introgression in two pupfishes, *Cyprinodon bifasciatus* and *C. atrorus*, endemic to the Cuatro Cienegas basin, Coahuila, Mexico
***Carson, E.W. and Dowling, T.E.**
Evan.Carson@asu.edu, Thomas.Dowling@asu.edu Arizona State University; Arizona State University

2:30-2:45 282 Millennial-Scale Population Genetics of Voles (*Microtus montanus*) and Gophers (*Thomomys talpoides*) as Revealed by Ancient DNA
***Hadly, E. A. & Conroy, C. J.**
hadly@stanford.edu Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020

2:45-3:00 283 Molecular evidence for a reduced effective population size of hominoid males
Altheide, T.K. & *Hammer, M.F.
mhammer@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721

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#45 Molecular evolution **Session Moderator: M. Luciano**
KCEC Grand Ballroom Salon B

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1:15-1:30 284 Inference of Hill-Robertson interference on codon usage in *Drosophila*
***Kliman, R. M. & Hey, J.**
rkliman@kean.edu, jhey@mbcl.rutgers.edu Dept. of Biological Sciences, Kean University, Union, NJ 07083; Dept. of Genetics, Rutgers University, Piscataway, NJ 08854

1:30-1:45 285 Molecular Evolution of Alcohol Dehydrogenase Paralogues in Cactophilic *Drosophila*
***Luciano M. Matzkin, Walter F. Eanes**
lmatzkin@life.bio.sunysb.edu State University of New York at Stony Brook

1:45-2:00 286 Sequence variation of metabolic pathway genes in *Drosophila melanogaster*
***Efe Sezgin, Walter F. Eanes**
e_sezgin@life.bio.sunysb.edu State University of New York at Stony Brook

2:00-2:15 287 Diversifying Selection of the Tumor-Growth Promoter Angiogenin in Primate Evolution
***Jianzhi Zhang & Helene F. Rosenberg**
jzhang@niaid.nih.gov Laboratory of Host Defenses, National Institute of Allergy and Infectious Diseases, National Institutes of Health

2:15-2:30 288 Molecular evolution of the Endo16 cis-regulatory region in *Strongylocentrotus*
***James P. Balhoff and Gregory A. Wray**
james.balhoff@duke.edu, gwray@duke.edu Dept. of Biology, Duke University

2:30-2:45 289 Molecular evolution of a pathogenicity island
***Tarr, C. L. & Whittam, T. S.**
tarrc@msu.eu National Food Safety and Toxicology Center, Michigan State University

2:45-3:00 290 Ecological genetics of a trypsin proteinase inhibitor gene family
***Clauss, M.J. & Mitchell-Olds, T**
clauss@.ice.mpg.de Department of Genetics and Evolution, Max Planck Institute for Chemical Ecology

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#46 Biogeography/geographic variation Session Moderator: J. Alexandrino
KCEC Grand Ballroom Salon D

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1:15-1:30 291 Historical Biogeography of the Golden-striped Salamander (*Chioglossa lusitanica*) in the Iberian Peninsula
***Alexandrino, J., Teixeira, J., Arntzen, J.W. & Ferrand N.**
jmalexan@uclink.berkeley.edu UC Berkeley Museum of Vertebrate Zoology, USA; Centro de Estudos de Ciencia Animal, ICETA-Universidade do Porto, Portugal

1:30-1:45 292 Genetic and chromosomal differentiation in relation to behavioral variation in the gray treefrog, *Hyla chrysoscelis*.
***Keller, M. J. & Gerhardt, H. C.**
kellermj@missouri.edu University of Missouri-Columbia

1:45-2:00 293 Linking continental geometry, environment and evolutionary history to explain the species richness pattern in African birds
***Jetz, W., Rahbek, C. & Harvey, P.H.**
walter.jetz@zoo.ox.ac.uk Dept Zoology, University of Oxford, Zoological Museum, University of Copenhagen, Dept Zoology, University of Oxford

2:00-2:15 294 Phylogenetics of Barbets (Aves: Piciformes): Pantropical Biogeography and Life History Convergence
§Moyle, RG
rmoyle@lsu.edu Department of Biological Sciences and Museum of Natural Science, Louisiana State University

2:15-2:30 295 Gene flow effects on species range boundary formation and phenotypic variance along an environmental gradiant.
Strauss, B.
bstrauss@princeton.edu Princeton University.

2:30-2:45 296 Geographic variation in the life history and morphology of temperate and tropical death adders (Acanthophis: Elapidae)
***Spencer, C.L., R. Shine and J.S. Keogh**
cspencer@uta.edu; rics@bio.usyd.edu.au; Scott.Keogh@anu.edu.au Department of Biology, Box 19498, University of Texas at Arlington, Arlington, TX 76019 U.S.A.; School of Biological Sciences A08, The University of Sydney, NSW 2006 Australia; Division of Botany and Zoology, Australian National University, Canberra, ACT 0200 Australia

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Thursday late afternoon: 3:30pm to 5pm

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#40 Symposium ASN: Young investigator, continued UT Conference Center 413 ABC

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#47 Genomics **Session Moderator: Cristian I. Castillo-Davis**
Holiday Inn Tennessee Ballroom

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3:30-3:45 297 Patterns of Silent and Replacement Substitutions in over 2,000 Human Genes
Stanley, S. E.
s.stanley@genaissance.com Genaissance Pharmaceuticals, Population Genomics Group, 5 Science Park, New Haven, CT 05611

3:45-4:00 298 Global Variation in Gene Expression of Natural Isolates of *Saccharomyces cerevisiae*
***Townsend, Jeffrey P., Cavalieri, Duccio, Hartl, Daniel L.**
JTownsend@OEB.Harvard.edu Organismic and Evolutionary Biology, Harvard University; Department of Animal Genetics and Genetics, University of Florence; Organismic and Evolutionary Biology, Harvard University

4:00-4:15 299 Testing for recent positive selection on a human disease mutation using the extent of haplotype sharing
***Toomajian, C. & Kreitman, M.**
cmtoomaj@midway.uchicago.edu, mkre@midway.uchicago.edu Committee on Genetics and Department of Ecology and Evolution; University of Chicago

4:15-4:30 300 Evolution of vertebrate steroid receptors by ligand exploitation and serial genome expansins
§Thornton, J.
jt121@columbia.edu Columbia University Department of Biological Sciences

4:30-4:45 301 Evidence for Gradualism? Genome-wide Rates of Molecular Evolution in *C. elegans*
Castillo-Davis, Cristian I.
ccastillo-davis@oeb.harvard.edu Department of Organismic and Evolutionary Biology; Harvard University Department of Organismic and Evolutionary Biology; Harvard University

4:45-5:30 302 Town hall meeting led by M. Feder

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#48 Mating/breeding systems **Session Moderator: Diana Wolf**
KCEC Grand Ballroom Salon A

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3:30-3:45 303 The influence of meiotic drive on breeding system evolution and the evolution of androdioecy
***Wolf, D. & Takebayashi, N.**
dewolf@duke.edu Duke University

3:45-4:00 304 Phylogenetic analysis reveals multiple origins of gender dimorphism in Wurmbea (Colchicaceae)
***Case, A.L., S.W. Graham, T.D. Macfarlane, & S.C.H. Barrett**
acase+@pitt.edu; swgraham@ualberta.ca; terrym@calm.wa.gov.au; barrett@botany.utoronto.ca Botany Dept., University of Toronto; Biological Sciences Dept., University of Alberta; Dept. of Conservation and Land Management Western Australia; Botany Dept., University of Toronto

4:00-4:15 305 Interactions between breeding system and life history in an herbaceous plant
Galloway, Laura
lgalloway@virginia.edu University of Virginia

4:15-4:30 306 The evolution of breeding system in the plant genus *Thalictrum* (Ranunculaceae): a phylogenetic approach.
***Brunet, J & Liston A.**
brunetj@bcc.orst.edu and listona@bcc.orst.edu Department of Botany and Plant Pathology Oregon State University Cordley Hall 2082 Corvallis, OR 97331

4:30-4:45 307 Spatial and temporal variation in the pollen pool of an invasive tree, *Albizia julibrissin*
***Hamrick, J.L., Godt, M.J.W., Irwin, A.J. & Smouse, P.E.**
hamrick@dogwood.botany.uga.edu Departments of Botany and Genetics, Univ. of Georgia; Dept. of Botany, Univ. of Georgia; Dept. of Ecology, Evolution & Natural Resources, Cook College, Rutgers Univ.; Department of Ecology, Evolution & Natural Resources, Cook College, Rutgers Univ.

4:45-5:00 308 Temporal variability in pollen pool of *Albizia julibrissin*: Impact of Year to Year Pollen Variation on Effective Pollen Pool Size
***Andrew J. Irwin, James L. Hamrick, Mary Jo W. Godt, Peter E. Smouse**
irwin@aesop.rutgers.edu Dept Ecology, Evolution & Natural Resources, Cook College, Rutgers University, New Brunswick NJ, Department of Botany, University of Georgia, Athens GA, Department of Botany, University of Georgia, Athens GA, Dept Ecology, Evolution & Natural Resources, Cook College, Rutgers University, New Brunswick NJ

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#49 Macroevolution **Session Moderator: P-M Agapow**
KCEC Grand Ballroom Salon C

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3:30-3:45 309 Origin and Evolution of the Tetraodontiformes(Teleostei, Pisces), with an Analysis of the Patterns of Speciation of the Family Triacanthodidae
§Santini, F.
fsantini@zoo.utoronto.ca University of Toronto, Department of Zoology

3:45-4:00 310 Heterochrony in the genus *Canis*
Abby Grace Drake
agdF93@stout.hampshire.edu Organismic and Evolutionary Biology Program, University of Massachusetts, Amherst

4:00-4:15 311 Evolution of scapula shape disparity in squirrels
Swiderski, D. L.
dlswider@umich.edu University of Michigan

4:15-4:30 312 Detecting macroevolutionary trends and asymmetry
***Agapow, P-M and Purvis, A**
p.agapow@ic.ac.uk Dept. of Biology, Imperial College

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#50 Combined data systematics **Session Moderator: J. Harshman**
KCEC Grand Ballroom Salon B

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3:30-3:45 313 Molecular phylogenetics and biogeography of pythonine snakes
§Fox, G.M.
foxg@umich.edu Museum of Zoology and Department of Ecology and Evolutionary Biology, University of Michigan

3:45-4:00 314 Phylogenetic analysis of the Arctic char - Dolly Varden species complex based on microsatellite loci and nuclear DNA intron sequences
***Leder, E. H. and Phillips, R. B.**
erica@csd.uwm.edu Department of Biological Sciences, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53211

4:00-4:15 315 Resolution of an Intractable Problem: Multigene Phylogeny of Muroid Rodents
***Adkins, R. M., Anderson, J., & Steppan, S.**
radkins@bio.umass.edu Biology Department, University of Massachusetts, Organismal and Evolutionary Biology Graduate Program, University of Massachusetts, Biology Department, Florida State University

4:15-4:30 316 Molecular phylogeny of bats, and the origin of echolocation
***Madsen, O. Teeling, E. Stanhope, M.J. de Jong, W.W. & Springer, M.S.**
o.madsen@bioch.kun.nl University of Nijmegen, The Netherlands, Queen's University of Belfast, UK , Queen's University of Belfast, UK, University of Nijmegen, The Netherlands, University of California, Riverside, US

4:30-4:45 317 Molecules, morphology, and the enigmatic "phascolosoricine" marsupials of New Guinea
***Krajewski, C. & Westerman, M.**
careyk@siu.edu Department of Zoology, Southern Illinois University, Carbondale, IL, 62901-6501, USA; Department of Genetics, La Trobe University, Bundoora, Victoria, 3083, Australia

4:45-5:00 318 True or false?: The true gavial is a false gavial
***Harshman, J., Braun, M. J., and Huddleston, C. J.**
harshman@lms.si.edu Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution

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#51 Phylogeny based comparative methods -theory **Session Moderator: F. James Rohlf**
KCEC Grand Ballroom Salon D

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3:30-3:45 319 Comparing methods for testing correlates of species richness
§*Isaac, N.J.B., Agapow, P.-M., Orme, C.D.L. & Purvis, A.
n.isaac@ic.ac.uk, p.agapow@ic.ac.uk, a.purvis@ic.ac.uk Department of Biology, Imperial College, Silwood Park, Ascot, Berks, SL5 7PY, UK

3:45-4:00 320 The Phylogenetic Mixed Model
***Housworth, E., Martins, E., and Lynch, M.**
eah@math.uoregon.edu, emartins@work.uoregon.edu, mlynch@darkwing.uoregon.edu Mathematics Department, University of Oregon, Biology Department, University of Oregon until June then Indiana University, Biology Department,

4:00-4:15 321 Phylogenetic autocorrelation: the correct ML estimate and its interpretation
F. James Rohlf
rohlf@life.bio.sunysb.edu Dept. Ecology and Evolution, SUNY at Stonybrook, Stony Brook, NY 11794-5245

4:15-4:30 322 Using More of the Tree to Detect Variability in Diversification Rates: Two New Approaches
Moore, Brian R., Chan, Kai M. A.
brian.moore@yale.edu; kaichan@princeton.edu Department of Ecology and Evolutionary Biology, Yale University, New Haven, CT 06520; Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544-1003

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#13 Education **Session Moderator: L. Gross**
UTCC Room 406

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3:30-3:45 76 Research on Butterfly Behavior: A Museum/University Mutualism
Tomalei J. Vess
tjv1@duke.edu, dean.briere@ncmls.org Duke University, Museum of Life and Science

3:45-4:00 77 Training fearless biologists: quantitative skills all our students need
Gross, L. J.
gross@tiem.utk.edu Departments of Ecology and Evolutionary Biology and Mathematics, University of Tennessee

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5:30 Busses to picnic at Knoxville Zoo for participants with badge & guests who purchased tickets

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FRIDAY SYMPOSIA AND CONTRIBUTED PAPERS

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#52 Symposium SSB: Developing uses for phylogenetic tree shape in the study of evolution

Organizers: Mooers and Heard

UT Conference Center 413 ABC

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8:10-8:20 322 Brief introduction/overview. Descriptors and theoretical models of tree shape, patterns in tree shape among published trees
Stephen Heard & Arne Mooers
Dept. of Biological Sciences University of Iowa, Iowa City, IA 52242-1297; Dept. Biological Sciences, Simon Fraser University, Burnaby, B.C. V5A 1S6 Canada

8:20-8:45 323 Beyond long-branch-attraction: how can tree shape constrain, bias, or inform efforts at phylogeny reconstruction?
Benjamin Salisbury
Department of Ecology and Evolutionary Biology, Yale University, P.O. Box 208106, New Haven, CT 06520-8106

8:45-9:15 324 Tree shapes in the fossil record: revelations from sampling along the temporal axis.
Paul Pearson & Katharine Harcourt-Brown
Department of Earth Sciences, University of Bristol, Queens Rd, Bristol BS8 1RJ, UK; Department of Earth Sciences, University of Bristol, Queens Rd, Bristol BS8 1RJ, UK

9:15-9:45 325 Cladistics vs. stratocladistics: does the value of fossils in phylogeny estimation depend on tree shape?
David Fox
Department of Geology and Geophysics, University of Minnesota, 310 Pillsbury Drive SE, Minneapolis, MN 55455

9:45-10:15 326 Tree shapes and processes of clade diversification
Alan de Queiroz
EPO Biology and University Museum, Campus Box 334, University of Colorado, Boulder, CO 80309-0334

10:45 -11:15 327 Tree shapes and the phylogenetic comparative method
Emilia Martins & Elizabeth Housworth
Department of Biology Indiana University, Jordan Hall, Bloomington, IN 47405; Department of Mathematics, University of Oregon, Eugene OR 97403

11:15-11:45 328 Using tree shape to understand extinction, and extinction to understand tree shape
Stephen Heard & Arne Mooers
Dept. of Biological Sciences University of Iowa, Iowa City, IA 52242-1297; Dept. Biological Sciences, Simon Fraser University, Burnaby, B.C. V5A 1S6 Canada

11:45 -12:15 329 Using tree shape to study historical demography and population genetics
Oliver Pybus & Paul Harvey
Department of Zoology, Univ. of Oxford, South Parks Rd., Oxford OX1 3PS UK; Department of Zoology, Univ. of Oxford, South Parks Rd., Oxford OX1 3PS UK

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#53 Genomics **Session Moderator: D. R. Denver**
Holiday Inn Tennessee Ballroom

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8:00-8:15 330 Patterns and Rates of Mutation in the Nuclear Genome of *Caenorhabditis elegans*
***Denver, D.R., Morris, K., Harris, K., Kewalramani, A., Estes, S., Lynch, M., Thomas, W.K.**
drd59a@umkc.edu, morrisk@umkc.edu, katharrisemail@yahoo.com, sestes@darkwing.uoregon.edu mlynch@oregon.uoregon.edu University of Missouri-Kansas City, University of Missouri-Kansas City, University of Missouri-Kansas City, University of Missouri-Kansas City; University of Oregon, University of Oregon, University of Missouri-Kansas City

8:15-8:30 331 Monitoring changes in expression of microsatellite - associated genes in *C. elegans,* using DNA arrays
***Streelman, J.T., Denver, D.R. & W.K. Thomas**
jts3@hopper.unh.edu University of New Hampshire, University of Missouri - Kansas City, University of Missouri - Kansas City

8:30-8:45 332 Germline and sex-limited genes distributed non-randomly across genome and with recombination rate in *C. elegans*
***Cutter, A.D. & Ward, S.**
acutter@u.arizona.edu Dept Ecology & Evolutionary Biology (U of Arizona), Dept Molecular & Cellular Biology (U of Arizona)

8:45-9:00 333 Nuclear mitochondrial pseudogenes in *Drosophila*
***dos Santos, P., Nardi, F. & Roderick, G. K.**
priscila@nature.berkeley.edu Division of Insect Biology, ESPM, UC Berkeley; Division of Insect Biology, ESPM, UC Berkeley and Dept. of Evolutionary Biology, University of Siena, Italy; Division of Insect Biology, ESPM, UC Berkeley

9:00-9:15 334 Evolution of cis- and trans-regulation of a heat-shock gene in *Drosophila*
***Feder, M.E., Bettencourt, B.R., and Lerman, D.N.**
m-feder@uchicago.edu Dept. of Organismal Biol. & Anatomy and The Committee on Evolutionary Biology, Univ. of Chicago, Chicago, IL 60637

9:15-9:30 336 Evolved variation in gene expression: Whole genome analysis of gene expression in thermally adapted *Escherichia coli*
***Riehle, M.M., Bennett, A.F., Long, A.D.**
mriehle@uci.edu, abennett@uci.edu, tlong@uci.edu Department of Ecology and Evolutionary Biology, University of California Irvine, Irvine, CA 92697-2525

9:30-9:45 337 Quantitative analysis of the *Drosophila* transcriptome: sex and genotype contributions to transcriptional variance
***Gibson, G., Riley, M. and Passador-Gurgel., G.**
ggibson@unity.ncsu.edu Department of Genetics, North Carolina State University, Raleigh NC 27695-7614

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#54 Evolutionary genetics of microorganisms **Session Moderator: Paul Sniegowski**
UT Conference Center Room 406

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8:00-8:15 338 Phylogenetic relationships among members of the ciliate class Spirotrichea based on multiple molecular markers
***Tovah Salcedo, Oona Snoeyenboes-West, Laura Katz**
tsalcedo@email.smith.edu Smith College (all three authors)

8:15-8:30 339 A shifted paradigm: impact of lateral gene transfer on the origin and diversification of eukaryotes
Katz, L.A.
LKatz@Smith.edu Dept. Biol. Sciences, Smith College & Program in Organismic and Evolutionary Biology, UMass-Amherst

8:30-8:45 340 Evolution in perpetual motion: the planktonic foraminifera
***de Vargas, C., Palumbi, S. & Norris, R.**
cvargas@oeb.harvard.edu Department of Organismic and Evolutionary Biology, Harvard University; Department of Organismic and Evolutionary Biology, Harvard University; Department of Geology and Geophysics, Woods Hole Oceanographic Institution

8:45-9:00 341 Dynamics of mutator allele substitution in experimental *E. coli* populations
***Sniegowski, P.D. and Treis, T.**
paulsnie@sas.upenn.edu Department of Biology, University of Pennsylvania

9:00-9:15 342 Mutation, compensation and adaptive potential in *Escherichia coli*.
Francisco B.-G. Moore
moorefra@msu.edu Michigan State University

9:15-9:30 343 The influence of present selection, past selection, and historical contingency on the effects of random mutations in *Escherichia coli*
Remold, Susanna K
remold@msul.edu Center for Microbial Ecology, Michigan State University

9:30-9:45 344 Environmental dependence of beneficial mutations in *Escherichia coli*
***Ostrowski, E.A. & Rozen D.E.**
ostrow24@pilot.msu.edu Michigan State University

9:45-10:00 345 Quantitative genetics in crosses between two yeast species
***Greig, D., Louis, E. J., Borts, R. H. & Travisano, M**
d.greig@ucl.ac.uk University of Houston, Texas, USA; University of Leicester, UK; University of Leicester, UK; University of Houston, Texas

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#55 Evolution of sex **Session Moderator: J. Logsdon**
UT Conference Center Room 406

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8:15-8:30 346 Unscrambled X: Detailed Inference of Mammal Sex Chromosome Divergence
Pearson, N.M.
n-pearson@uchicago.edu Department of Ecology and Evolution, University of Chicago

8:30-8:45 347 Do bacteria have sex?
Redfield, R. J.
redfield@interchange.ubc.ca Dept. of Zoology, University of British Columbia

8:45-9:00 348 Molecular origins of meiotic sex: clues from protist genes
***Logsdon, J. M., Malik, S.-B., Ramesh, M. A.**
jlogsdon@biology.emory.edu Department of Biology, Emory University

9:00-9:15 349 Expression profiles of monogamous versus promiscuous populations in *Drosophila melanogaster* with microarray technique
Holland, B., *Lazebny, O.E. & Nuzhdin, S.V.
btholland@lbl.gov oelazebny@ucdavis.edu svnuzhdin@ucdavis.edu
Section of Evolution & Ecology, UC Davis, Davis, CA

9:15-9:30 350 The relative importance of drift vs. epistasis in the evolution of sex and recombination
***Otto, Sally & Barton, Nick**
otto@zoology.ubc.ca University of British Columbia; University of Edinburgh

9:30-9:45 351 Mutation-Selection Balance and the Maintenance of Sex
J. R. Chasnov
Jeffrey.Chasnov@ust.hk Department of Mathematics, Hong Kong University of Science & Technology

9:45-10:00 352 Speciation and Selection Without Sex: the Bdelloid Rotifers
***Birky, Bill; Henry, Elena; Herbertson, Linnea; Maughan, Heather; Wolf, Cynthia**
birky@u.arizona.edu Department of Ecology and Evolutionary Biology, and Graduate Interdisciplinary Program in Genetics, The University of Arizona; Department of Ecology and Evolutionary Biology, The University of Arizona; Department of Ecology and Evolutionary Biology, The University of Arizona; Graduate Interdisciplinary Program in Genetics, The University of Arizona; Department of Molecular and Cellular Biology, The University of Arizona

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#56 Molecular evolution **Session Moderator: Carlos Busta**
KCEC Grand Ballroom Salon B

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8:15-8:30 353 Estimates of adaptive protein evolution
Nick G.C. Smith, *Adam Eyre-Walker
a.c.eyre-walker@sussex.ac.uk Centre for the Study of Evolution & School of Biological Sciences, University of Sussex, Brighton, BN1 9QG, UK

8:30-8:45 354 Inferring the strength of selection from polymorphism and divergence data
***Bustamante, C. D. [1], Nielsen, R.[2], Sawyer, S.[3], Hartl, D. L.[4]**
cbustam@fas.harvard.edu 1. Department of Organismic and Evolutionary Biology, Harvard University. 2. Department of Biometrics, Cornell University. 3. Department of Mathematics, Washington University, St. Luis. 4. Department of Organismic and Evolutionary Biology, Harvard University-

8:45-9:00 356 Numerous gene rearrangements in the mitochondrial genome of the wallaby louse, *Heterodoxus macropus* (Phthiraptera)
***Shao, R., Campbell, N. J. H., and Barker, S. C.**
r.shao@mailbox.uq.edu.au , N.Campbell@mailbox.uq.edu.au , S.Barker@cmcb.uq.edu.au Department of Microbiology and Parasitology, and Institute for Molecular Bioscience, University of Queensland, Brisbane, Queensland, 4072, Australia.

9:00-9:15 357 Evolutionary implications of mitochondrial mutations that impair male fertility
Gemmell, N. J.
n.gemmell@zool.canterbury.ac.nz Dept. Zoology, University of Canterbury, Private Bag 4800, Christchurch, New Zealand

9:15-9:30 358 Ciliate Histone Diversity: Dramatic Levels of Intraspecific Variation in Single-celled Eukaryotes
***Lasek-Nesselquist, Erica and Katz, Laura**
elasek@smith.edu Smith College (both authors)

9:30-9:45 359 Evolution of Color Vision in Butterflies
Briscoe, A.
adriana.briscoe@uchsc.edu University of Colorado Health Sciences Center, Denver, CO

9:45-10:00 360 Molecular Evolution of Luciferases in Bioluminescent Click Beetles: Evidence for Selection on Light Color
***Stolz, U. & Feder, J.L.**
Uwe.Stolz.4@nd.edu University of Notre Dame

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#57 Plant reproductive biology **Session Moderator: L. Wolfe**
KCEC Grand Ballroom Salon C

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8:30-8:45 361 The evolution of selfing rate in heterogeneous environment
***Cheptou, P.O. Escarre, J. & Schoen, D. J.**
pchept@po-box.mcgill.ca (CHEPTOU) Dep't of Biology, Mc Gill University 1205, Dr Penfield Avenue Montreal, Quebec H3A 1B1 and Centre d'ecologie fonctionnelle et evolutive 1919, route de Mende 34293 Montpellier FRANCE; (Escarre) Centre d'ecologie fonctionnelle et evolutive 1919, route de Mende 34293 Montpellier FRANCE (schoen) Dep't of Biology, Mc Gill University 1205, Dr Penfield Avenue Montreal, Quebec H3A 1B1

8:45-9:00 362 Severe genetic cost of reproductive assurance in a self-fertilizing plant
***Herlihy, C., Eckert, C.**
herlihyc@biology.queensu.ca Queen's University, Department of Biology, Kingston, Ontario, Canada K7L3N6

9:00-9:15 363 Phenotypic plasticity for life-history traits in *Sagittaria latifolia* (Alismataceae): differences between monoecious and dioecious populations
***Dorken, M. E. & Barrett, S. C. H.**
dorken@botany.utoronto.ca, barrett@botany.utoronto.ca Department of Botany University of Toronto

9:15-9:30 364 A demographic approach to modeling sexual dimorphism in flower production
***Frey, Frank & Delph, Lynda F.**
ffrey@bio.indiana.edu Department of Biology, Indiana University (both authors)

9:30-9:45 365 A test of the pollination syndrome concept: what do the birds and bees say?
***Wolfe, L.M. and D.R. Sowell**
wolfe@gasou.edu Department of Biology, Georgia Southern University

9:45-10:00 366 Bumble bees and jewelweed: a mutualism gone awry?
Young, H.
hjyoung@middlebury.edu Biology Department; Middlebury College

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#58 Mating/breeding systems **Session Moderator: Kasey Maria**
KCEC Grand Ballroom Salon D

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8:00-8:15 367 Mating system, sex-determination, and genetic load in the parasitoid habrobracon hebetor
Antolin, M.F.
antolin@lamar.colostate.edu Department of Biology, Colorado State University, Fort Collins, CO 80523

8:15-8:30 368 Sticky sperm or sperm competition: why male order does not predict paternity in spiders
Danielson-Francois, A.
adaniels@u.arizona.edu Dept. of Ecology & Evolutionary Biology, University of Arizona

8:30-8:45 369 Talk Cancelled

8:45-9:00 370 When Sex Isn't An Option: the benefits of tychoparthenogenesis in natural mayfly populations
Ball, S.L.
sball@bates.edu Department of Biology, Bates College, Lewiston, Maine, 04240

9:00-9:15 371 Sexual size dimorphism in shorebirds: the influence of sexual and natural selection
***Szekely, T., Reynolds, J. D. & Figuerola, J. T.**
Szekely@bath.ac.uk, reynolds@uae.ac.uk, jordi@ebd.csic.es University of Bath, Bath, UK, University of East Anglia, Norwich, UK, Estacion Biologica de Donana, Sevilla, Spain

9:15-9:30 372 Does size matter? Sperm competition and in vitro fertilization success of alternative male mating phenotypes in chinook salmon (*Oncorhynchus tshawytscha*)
***Young,B.W., and Heath,D.D.**
youngs@uwindsor.ca dheath@uwindsor.ca Great Lakes Institute For Environmental Research and the University of Windsor, Windsor, Ontario, Canada.

9:30-9:45 373 Why males stay at home and females don't: Reproductive constraints on dispersal in a "harempolygynous" bat
Heckel, Gerald
gerald.heckel@zos.unibe.ch University of Berne, Switzerland

9:45-10:00 374 Talk Cancelled

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Friday late morning: 10am to 12noon

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#52 Symposium SSB: Developing uses for phylogenetic tree shape in the study of evolution, continued **UT Conference Center Room 413 ABC**

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#59 Coevolution **Session Moderator: D. Kapan**
KCEC Grand Ballroom Salon D

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10:30-10:45 375 Host recognition is responsible for symbiont composition in environmentally transmitted symbiosis
Nishiguchi, M.K.
nish@nmsu.edu Department of Biology, New Mexico State University

10:45-11:00 376 Contrasting demographic histories and the evolution of mimicry in *H. erato* and *H. melpomene*
Nicola Flanagan, Alex Tobler,* W. Owen McMillan
wmcmilla@rrpac.upr.clu.edu, flanagan@rrpac.upr.clu.edu, is988746@rrpac.upr.clu.edu University of Puerto Rico, Department of Biology

11:00-11:15 377 The evolution of diversity in mimicry--two butterflies and three butterflies revisited
Kapan, Durrell D.
dkapan@rrpac.uprc.clu.edu Departamento de Biologia, Universidad de Puerto Rico- Rio Piedras, Edificio Julio Garcia Diaz 208 (lab/courier) P.O. Box 23360 San Juan, PR 00931-3360

11:15-11:30 378 Virulent *Wolbachia* in a novel host
***McGraw, E. A., Merritt, D. J. , Droller, J. N., & S. L. O'Neill**
elizabeth.mcgraw@yale.edu Section of Vector Biology, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT, USA Department of Zoology & Entomology, University of Queensland, St Lucia, Qld Australia Section of Vector Biology, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT, USA Section of Vector Biology, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT, USA

11:30-11:45 379 Coevolution between species with partially overlapping geographic ranges
***Nuismer, S.L., Thompson, J.N., Gomulkiewicz, R.**
nuismer@mail.utexas.edu Section of Integrative Biology C0930, University of Texas, Austin, TX 78712, Department of Ecology and Evolutionary Biology, University of California, Santa Cruz, CA 95064

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#60 Genomics **Session Moderator: C. Hess**
Holiday Inn Tennessee Ballroom

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10:30-10:45 380 Mhc evolution in house finches
***Hess, C. and Edwards, S.**
cmhess@u.washington.edu, sedwards@u.washington.edu Department of Zoology, University of Washington

10:45-11:00 381 Large-Scale Comparative Genomic Sequencing: Toward Mapping and Sequencing Targeted, Multimegabase Regions in 12 Vertebrates
***Thomas, J.W., Summers, T.J., Lee-Lin, S.Q., Maduro, V.V.B., Idol, J.R., Prasad, A.B., Ryan, J.F., Touchman, J.W., Bouffard, G.G., Thomas, P.J., Beckstrom-Sternberg, S.M., Blakesley, R.W., McDowell, J.C., Dietrich, N.L., and Green, E.D.**
jthomas@nhgri.nih.gov National Human Genome Research Institute, NIH, Bethesda, MD, National Human Genome Research Institute, NIH, Bethesda, MD. NIH Intramural Sequencing Center , Gaithersburg, MD.

(cont. from previous page) NIH Intramural Sequencing Center , Gaithersburg, MD. NIH Intramural Sequencing Center , Gaithersburg, MD. NIH Intramural Sequencing Center , Gaithersburg, MD. NIH Intramural Sequencing Center , Gaithersburg, MD. NIH Intramural Sequencing Center , Gaithersburg, MD. NIH Intramural Sequencing Center , Gaithersburg, MD. National Human Genome Research Institute, NIH, Bethesda, MD and NIH Intramural Sequencing Center , Gaithersburg, MD.

11:00-11:15 382 Selection on the immune system: adaptation in estuarine fish populations to severe environmental stress
Cohen, S.
scohen@oeb.harvard.edu Harvard University

11:15-11:30 383 From DNA to differential reproductive success: nucleotide polymorphism at the phosphoglucose isomerase locus of *Colias eurytheme*
***Wheat, C. W., Watt, W. B., Pollock, D. D. , and Schulte, P. M.**
cwheat@stanford.edu Stanford University; Stanford University; Louisiana State University; University of Waterloo

11:30-11:45 384 Evolutionary Analysis of Microarray Data from Natural Populations I.
***Crawford, D. L. and Oleksiak, M. F.**
crawforddo@umkc.edu School of Biological Science, Univ. Missouri-Kansas City, Kansas City, MO 64110

11:45-12:00 385 Evolutionary Analysis of Microarray Data from Natural Populations II.
***Oleksiak, M. F. and Crawford, D. L.**
oleksiakm@umkc.edu School of Biological Science, Univ. Missouri-Kansas City, Kansas City, MO 64110

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#61 Inbreeding/inbreeding depression **Session Moderator: Don Waller**
KCEC Grand Ballroom Salon C

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10:30-10:45 386 Inbreeding depression in a metapopulation
Whitlock, M. C.
whitlock@zoology.ubc.ca Department of Zoology, University of British Columbia

10:45-11:00 387 Inbreeding depression and reduced seed set in fragmented populations of *Echinacea angustifolia*
Wagenius, S.
wagenius@biosci.umn.edu University of Minnesota, Chicago Botanic Garden

11:00-11:15 388 Does inbreeding depression increase in harsher environments?
Waller, Don
dmwaller@facstaff.wisc.edu Department of Botany, University of Wisconsin - Madison

11:15-11:30 389 Evolution of a polygenic selfing-rate modifier under inbreeding depression caused by a symmetric overdominant locus
***Takebayashi, N. & D. Repasky**
ntakebay@duke.edu Indiana University/Duke University; Indiana University

11:30-11:45 390 The evolution of inbreeding in western red cedar (*Thuja plicata*)
***O'Connell, L. & Ritland, K.**
loconnel@interchange.ubc.ca, ritlan@interchange.ubc.ca Forestry Sciences Department, University of British Columbia, Vancouver, BC, Canada

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#62 Speciation **Session Moderator: Daven Presgraves**
KCEC Grand Ballroom Salon B

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10:30-10:45 391 Mitochondrial versus Nuclear gene flow between *Drosophila pseudoobscura* and *D. persimilis*
***Machado, C; Kliman, R.; Markert, J.; Shallop, K.; Hey, J.**
machado@mbcl.rutgers.edu Rutgers University

10:45-11:00 392 Detecting Gene Flow Between *Drosophila pseudoobscura* and *D. persimilis*
***Hey, J., Machado, C, Kliman, R., Markert, J.**
jhey@mbcl.rutgers.edu Rutgers University

11:00-11:15 393 A fine-scale genetic analysis of hybrid lethals between *Drosophila melanogaster* and *D. simulans*
Presgraves, D.C.
dvnp@mail.rochester.edu Department of Biology; University of Rochester

11:15-11:30 394 The Role of Ecology in the Sympatric Divergence of the Apple Maggot fly, *Rhagoletis pomonella*
***Filchak, K.E., Roethele, J.B., H. Dambroski, and J. Feder.**
Filchak.1@nd.edu Department of Biological Sciences, University of Notre Dame, Notre Dame IN. 46556.

11:30-11:45 395 Reproductive isolation and Haldane's rule in populations of stalk-eyed flies
***Toll, S., Swallow, J., and Wilkinson, G.**
sjtoll@wam.umd.edu University of Maryland, College Park (all)

11:45-12:00 396 Molecular evidence of sympatric host races within the holly leafminer *Phytomyza glabricola* (Diptera: Agromyzidae)
***Sonja J. Scheffer, David J. Hawthorne**
sscheffe@sel.barc.usda.gov Systematic Entomology Lab, USDA-ARS, Bld. 005, Rm. 137, BARC-W, 10300 Baltimore Av., Beltsville, MD 20705; Department of Entomology, University of Maryland, College Park, MD 20742

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#63 Sexual selection **Session Moderator: P. D. Lorch**
UT Conference Center Room 406

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10:30-10:45 397 Talk Cancelled

10:45-11:00 398 Perception, Recognition, Elaboration, and Innovation in Sexual Selection
Endler, J. A.
endler@lifesci.ucsb.edu Dept. EEM Biology, University of California, Santa Barbara, CA 93106

11:00-11:15 399 The evolution of female preference for symmetry in swordtail fishes
Morris, M. R.
morrism@oak.cats.ohiou.edu Department of Biological Sciences, Ohio University, Athens, OH 45701

11:15-11:30 400 The dynamics of sexually antagonistic coevolution: relative armament of males and females determines mating system in water striders
***Arnqvist, G. & Rowe, L.**
Goran.Arnqvist@eg.umu.se Animal Ecology, Dept. of Ecology and Environmental Science, University of Umeå, SE-901 87 Umeå, Sweden. Department of Zoology, University of Toronto, Toronto, Ontario M5S 1A1, Canada.

11:30-11:45 401 Sexual selection accelerates adaptation by natural selection
***Lorch, P. D.; Proulx, S; Day, T.; & Rowe, L.**
lorch@pitt.edu Zoology Department, University of Toronto

11:45-12:00 402 Age-specific mutation affects female preference for older males
***Beck, C. W. & Promislow, D. E. L.**
cbeck@biology.emory.edu, promislo@arches.uga.edu Department of Biology, Emory University, Department of Genetics, University of Georgia

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#64 Plant ecological genetics **Session Moderator: Lin Johnson**
Grand Ballroom Salon A

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10:30-10:45 403 Genetic Structure and Local Adaptation in Chesapeake Bay (Virginia, USA) Populations of Eelgrass
***Rhode, J.M. & Duffy, J.E.**
jmrhode@vims.edu; jeduffy@vims.edu College of William and Mary, School of Marine Science, Virginia Institute of Marine Science

10:45-11:00 404 Talk Cancelled

11:00-11:15 405 Differentiation and segregation of ecological traits in recombinant inbred lines made from mesic and xeric adapted ecotypes of *Avena barbata*
Robert G. Latta
Robert.Latta@Dal.ca Dept of Biology, Dalhousie University, Halifax, Nova Scotia, Canada

11:15-11:30 406 The roles of gene flow and pollen competition in hybridization between locally differentiated populations of *Lobelia cardinalis*
***Johnson, Linda MK, Galloway, Laura F**
lmj8a@virginia.edu University of Virginia, Department of Biology (both)

11:30-11:45 407 Ecological causes of selection for self-pollination: experimental manipulation of biotic interactions
***Moeller, D.A. & Geber, M.A.**
dam24@cornell.edu, mag9@cornell.edu Cornell University

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Friday afternoon: 1:15pm to 3pm

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#65 Symposium SSB: Bayesian methods in phylogenetics
UT Conference Center Room 413ABC **Organizers: Huelsenbeck and Nielson**

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1:15-1:20 408 Introduction
John Huelsenbeck and Rasmus Nielsen
Department of Biology, University of Rochester; Department of Biometrics, Cornell University

1:20-1:40 409 Prior and posterior probability in phylogenetics: The art of explicit assumption and inference.
Bruce Rannala
Department of Ecology and Evolution, SUNY-Stony Brook

1:40-2:00 410 Phylogenies and Bayesian inference: what's wrong.
Joe Felsenstein
Department of Genetics, University of Washington

2:00-2:20 411 Phylogenies and Bayesian inference: what's right.
Michael A. Newton.
Department of Statistics, University of Wisconsin, Madison

2:20-2:40 412 Sampling errors in molecular evolutionary trees.
Ziheng Yang
Department of Biology, Galton Laboratory, University College, London

2:40-3:00 413 Inference of HIV recombination with uncertain parentals.
Janet Sinsheimer
Department of Biostatistics, UCLA

3:00-3:20 414 Morphological phylogenetics the Bayesian way.
Fredrik Ronquist
Department of Systematic Zoology, Evolutionary Biology Centre, Upsala University, Sweden

3:20-3:40 415 A Bayesian analysis of the evolutionary history of the R locus in maize
Bret Larget
Department of Mathematics and Computer Science, Duquesne University

3:40-4:00 416 Bayesian estimation of evolutionary divergence times
Jeff Thorn
Department of Statistics, North Carolina State University

4:20-4:40 417 The Monophyly of *Ipomoea*: What have we learned from a Bayesian analysis
Rick Miller
Department of Zoology, Duke University

4:40-5:00 418 The comparative method and Bayesian inference.
John P. Huelsenbeck
Department of Biology, University of Rochester

5:00-5:20 419 A Bayesian method for analyzing the pattern of nucleotide substitution
Rasmus Nielsen
Department of Biometrics, Cornell University

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#66 Self-incompatibility/ population genetics of plants Session Moderator: D. J. Devlin
KCEC Grand Ballroom Salon A

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1:15-1:30 420 Estimating the number of S-alleles in natural populations of *Arabidopsis lyrata* (Brassicaceae) with sporophytic control of self-incompatibility
Mable, B.K.
bmable@uoguelph.ca Department of Botany, University of Guelph

1:30-1:45 421 Comparative evolution of self-incompatibility alleles in Solanaceae and Rosaceae
***Kohn, J. & Raspé, O.**
jkohn@ucsd.edu Section of Ecology, Behavior and Evolution, University of California San Diego, and Unité d'Ecologie et de Biogéographie, Université Catholique de Louvain, Place Croix du Sud, 5, B-1348 Louvain-la-Neuve, Belgium

1:45-2:00 422 Coalescence of S-alleles in *Physalis cinarescens* (Solanaceae)
***LaDoux, T. and Friar, E. A.**
tasha.ladoux@cgu.edu Rancho Santa Ana Botanic Garden

2:00-2:15 423 Genetic variation and differentiation in the Channel Islands (CA) endemic *Scrophularia villosa*
Helenurm, K.
helenurm@usd.edu University of South Dakota

2:15-2:30 424 Fine-scale Genetic Structure of an Epiphytic Orchid
***Trapnell, D.W. & Hamrick, J.L.**
dorset@dogwood.botany.uga.edu, hamrick@dogwood.botany.uga.edu Botany Department, University of Georgia, 2502 Plant Sciences Building, Athens, Georgia 30602 (both authors)

2:30-2:45 425 Genetic Population Structure of *Rhizophora mangle* in the Ten Thousand Island Archipelago, Southwest Florida.
***Devlin, D. J., S. L. Grace & S. E Travis**
donna_devlin@usgs.gov steven_travis@usgs.gov sue_grace@usgs.gov University of Louisiana, Lafayette, National Wetland's Research Center, National Wetland's Research Center, National Wetland's Research Center

2:45-3:00 426 The effects of forest management on patterns of contemporary pollen movement in the canopy tree *Pinus echinata*
Dyer, R.J.
rodney@jinx.umsl.edu Department of Biology, University of Missouri - St. Louis

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#67 Population genetics **Session Moderator: B. C. Verrelli**
KCEC Grand Ballroom Salon B

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1:15-1:30 427 Mitochondrial contribution to the evolution of thermal tolerance
***Zani, P. A., Swanson, S. E., Bradshaw, W. E., & Holzapfel, C. M.**
pzani@darkwing.uoregon.edu Department of Biology, University of Oregon

1:30-1:45 428 Interpreting multi-scale genetic patterns: gene flow of insects in fragmented alpine streams in Switzerland
***Monaghan, M.T., P. Spaak, C.T. Robinson, and J.V. Ward**
monaghan@eawag.ch Department of Limnology, EAWAG/ETH, 8600 Duebendorf, Switzerland

1:45-2:00 429 Population Structure of *Ixodes scapularis* along the Eastern Coast of the US Using SSCP
***Mixson, T., Fang, Q.**
tmixson@gasou.edu, qfang@gasou.edu Georgia Southern University

2:00-2:15 430 rDNA IGS length variation, growth rates and biological stoichiometry in the genus *Daphnia*
***Weider, L.J., Crease, T.J., Wang, W. & Elser, J.J.**
ljweider@ou.edu Univ. of Oklahoma Biological Station, Kingston, OK 73439; Dept. of Zoology, Univ. of Guelph, Guelph, Ontario, Canada ; Univ. of Oklahoma Biological Station, Kingston, OK
73439; Department of Biology, Arizona State University, Tempe AZ

2:15-2:30 431 Unusual haplotypes at the Insulin Receptor gene in *Drosophila melanogaster*
***Palmer, M.R., Tatar, M. & Rand, D.M.**
Michael_R_Palmer@Brown.edu Brown University, Dept. of Ecology & Evolutionary Biology, Providence, RI 02912

2:30-2:45 432 Traces of purifying and directional selection in *D. melanogaster* populations from ancestral and colonized habitats
***Kauer, M., Dieringer, D. & Schlötterer C.**
max.kauer@i122server.vu-wien.ac.at Kauer, M.: Inst.f.Animal Breeding and Genetics, Univ.Vet.Med Vienna, Dieringer, D.:Inst.f.Animal Breeding and Genetics, Univ.Vet.Med Vienna, Schlötterer, C.: Inst.f.Animal Breeding and Genetics, Univ.Vet.Med Vienna

2:45-3:00 433 The functional impact of Pgm amino acid polymorphism on glycogen content in *Drosophila melanogaster*
***Verrelli, B.C. and Eanes, W.F.**
verrelli@wam.umd.edu, SUNY at Stony Brook

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#68 Life history evolution **Session Moderator: David Reznick**
KCEC Grand Ballroom Salon C

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1:15-1:30 434 Comparative life history of four species of *Brachyraphis* (Poeciliidae): do patterns of variation change at increasing scales?
Mark C. Belk
Mark_Belk@byu.edu Department of Zoology, Brigham Young University

1:30-1:45 435 The evolution of senescence in natural populations of guppies (*Poecilia reticulata*): a comparative approach
***Reznick, D. N. and Elder D.**
David.Reznick@ucr.edu, dionna@citrus.ucr.edu Department of Biology University of California Riverside, CA 92521

1:45-2:00 436 Effects of aging on escape performance in guppies
***Ghalambor, C. K., Harper, R., & Reznick, D. N.**
camerong@citrus.ucr.edu University of California - Riverside

2:00-2:15 437 The genetic basis of an alternative male life history strategy in chinook salmon (*Oncorhynchus tshawytscha*): linkage analysis with molecular markers
***Busch, C.R. & Heath, D.D.**
cbusch@uwinds.or.ca, dheath@uwindsor.ca Great Lakes Institute for Environment Research, University of Windsor, 401 Sunset Ave, Windsor, Ontario N9B 3P4

2:15-2:30 438 Genetic and environmental components of offspring size in salmon: influences of rearing habitat and male reproductive phenotype
***Garant, D., Dodson, J.J., & Bernatchez, L.**
dany.garant.1@agora.ulaval.ca, julian.dodson@bio.ulaval.ca, louis.bernatchez@bio.ulaval.ca Département de Biologie, Université Laval

2:30-2:45 439 Multiple origins of placenta-like organs in the genus *Poeciliopsis*
***Mateos, M., Reznick, D., Vrijenhoek, R.C.**
mmateos@mbari.org, david.reznick@ucr.edu, vrijen@mbari.org Rutgers University- Monterey Bay Aquarium Research Institute, University of California, Riverside, Monterey Bay Aquarium Research Institute

2:45-3:00 440 Estimating the relative role of biotic andabiotic factors in regulating the population dynamics of cyprinodontid fishes from a 22-year time series.
***Trexler, J. C., W. F. Loftus, and S. Perry**
trexlerj@fiu.edu, Bill_Loftus@nps.gov, Sue_Perry@nps.gov Department of Biological Sciences, Florida International University; Everglades National Park Field Station, US Geological Survey – Biological Resources Division; South Florida Natural Resources Center, Everglades National Park

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#69 Molecular evolution PART B
UT Conference Center Room 406

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1:15-1:30 446 Evaluating mutation patterns in clones as a test of ancient DNA authenticity
***Delefosse, T. & Yoder, A.D.**
t-delefosse@northwestern.edu, ayoder@nwu.edu Northwestern University, Field Museum of Natural History

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#70 Mechanisms of reproductive isolation **Moderator T. Mendelson**
Holiday Inn Tennessee Ballroom

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1:30-1:45 448 Sexual isolation between mainland and Bogota populations of *Drosophila pseudoobscura*
***Kim, Y.-K., Anderson, W. W., Ruiz-Garcia, M. & Alvarez, D**
yongkyu@arches.uga.edu; wyatt@franklin.uga.edu Department of Genetics, University of Georgia, Athens, GA, USA., Department of Genetics, University of Georgia, Athens, GA, USA., Department of Biology, Pontificia Universidad Javeriana, Bogota, Colombia., Department of Biology, Pontificia Universidad Javeriana, Bogota, Colombia.

1:45-2:00 449 Divergent selection along an elevational gradient: consequences for reproductive isolation in *Colias* butterflies
***Ellers, J. & Boggs, C. L.**
jellers@stanford.edu Stanford University, Stanford CA 94305 USA

2:00-2:15 450 The Role of Conspecific Sperm Precedence in Hybridizing Field Crickets (*Gryllus*)
Hume, G.
glh5@cornell.edu Ecology and Evolutionary Biology, Cornell University

2:15-2:30 451 Induction of host preferences and reproductive isolation in *Neochlamisus bebbianae* leaf beetles
Funk, D.J.
daniel.j.funk@vanderbilt.edu Biology Department, Vanderbilt University

2:30-2:45 452 Mate choices and reproductive isolation of host races
***Whipple, A. V., Heinrich, P., Petre, H., Northridge, E. and Abrahamson, W. G.**
whipple@bucknell.edu Department of Biology, Bucknell University, Lewisburg, PA 17837

2:45-3:00 453 Talk Cancelled

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#71 Species interactions **Session Moderator: M. White/J. Bernardo**
KCEC Grand Ballroom Salon D

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1:30-1:45 455 Study of a convergent cave beetle/cave cricket predator prey system
White, M.
mollyjean99@hotmail.com University of Cincinnati

1:45-2:00 456 Why are Chillies hot? Directed deterrence of capsaicin in wild chillies
***Tewksbury, J. J. & Nabhan, G. P.**
jtewksbury@zoo.ufl.edu, Gary.Nabhan@nau.edu Department of Zoology, University of Florida; Center for Sustainable Environments, Northern Arizona University

2:00-2:15 457 History makes a difference: unique human influences on wolf/dog evolution explains the peculiar phylogeny of this *Canis sp.* pair
Crockford, S.
scrock@tnet.net Pacific Identifications Inc.

2:15-2:30 458 Geographical variation in predator defenses: lateral plate reduction and asymmetry in threespine stickleback
***Bergstrom, C.A. & Reimchen, T.E.**
C.A. Bergstrom: cbergstr@uvic.ca T.E. Reimchen: reimchen@uvic.ca
Department of Biology - University of Victoria, British Columbia, Canada
Department of Biology - University of Victoria, British Columbia, Canada

2:30-2:45 459 Why such a narrow view of character displacement? Towards a broader and deeper conceptualization of character displacement
Bernardo, J.
jbernardo@frostburg.edu Dept. of Biology, Frostburg State University

2:45-3:00 460 Quantifying Constraint to Assess Development in Ecological Networks
***Latham, L. & Scully, E.**
lglatham@home.com (Latham), escully@towson.edu (Scully) Towson University, Department of Biological Sciences, College of Science and Mathematics, 8000 York Road, Towson, Maryland 21252-0001, USA

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Friday late afternoon: 3:30pm to 5pm

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#65 Symposium SSB: Bayesian methods in phylogenetics, cont.
UT Conference Center Room 413ABC

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#72 Developmental evolutionary biology
Holiday Inn Tennessee Ballroom **Session Moderator: D. Remington**

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3:30-3:45 461 Molecular evolution of floral development genes in *Arabidopsis thaliana*
***Olsen, K.M. and Purugganan, M.D.**
kmolsen@unity.ncsu.edu Genetics Dept., North Carolina State University

3:45-4:00 462 The hunt for "biodiversity genes": GAI homologues in the Hawaiian silversword alliance.
***Remington, D.L. & Purugganan, M.D.**
dlreming@unity.ncsu.edu, michaelp@unity.ncsu.edu Department of Genetics, North Carolina State University, Raleigh, NC 27695-7614

4:15-4:30 463 Simple leaves, complex leaves: which way? how?
***Bharathan, G., Goliber, T., Chen, J-J, Sinha, N.**
geeta@life.bio.sunysb.edu Ecology and Evolution, SUNY, Stony Brook, NY 11794, Plant Biology, UC Davis, Davis, CA 95616, Plant Biology, UC Davis, Davis, CA 95616, Plant Biology, UC Davis, Davis, CA 95616

4:00-4:15 464 Floral MADS box genes and the evolution of sexual dimorphism in dioecious meadow rues (*Thalictrum*, Ranunculaceae).
***Di Stilio, V. S.; Kramer E. M. and Baum D. A.**
vdistilio@oeb.harvard.edu; ekramer@oeb.harvard.edu; dbaum@oeb.harvard.edu Department of Organismic and Evolutionary Biology, Harvard University

4:30-4:45 465 Molecular evolution of the CYCLOIDEA gene family in *Antirrhineae* (Scrophulariaceae)
***Hileman, Lena C. & Baum, David A.**
lhileman@oeb.harvard.edu, dbaum@oeb.harvard.edu, Dept. of Organismic and Evolutionary Biology, Harvard University

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#73 Population genetics **Session Moderator: Stephen Proulx**
KCEC Grand Ballroom Salon D

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3:30-3:45 466 Inferring the genetic structure of populations from dominant marker data
***Holsinger, K. E., and Lewis, P. O.**
kent@darwin.eeb.uconn.edu, paul.lewis@uconn.edu Department of Ecology & Evolutionary Biology, U-3043, University of Connecticut Storrs, CT 06269-3043

3:45-4:00 467 Coalescence in a Continuous, Linear Population
***Wilkins, J. F.**
jfwilkin@fas.harvard.edu Biophysics Program & Department of Organismic and Evolutionary Biology, Harvard University

4:00-4:15 468 Isolation By Distance and Complex Population Genetics: The self-organization of population structure
***Hoelzer, G. A., Tull, J. C., & Ray, C.**
hoelzer@unr.edu Department of Biology, University of Nevada Reno; Program in Ecology, Evolution, and Conservation Biology, University of Nevada Reno; Biological Research Resource Center, University of Nevada Reno

4:15-4:30 469 Model selection among different migration models
Beerli, Peter
beerli@genetics.washington.edu University of Washington, Seattle

4:30-4:45 470 Characterizing deleterious genomic mutations in finite populations with linkage disequilibrium
***Deng, H.-W. & Li, J.**
deng@creighton.edu (Deng) Creighton University and HuNan Normal University (Li) Creighton Univ.

4:45-5:00 471 What can invasion analyses tell us about evolution under stochasticity in finite populations?
***Proulx, S. R. & Day T.**
proulx@zoo.utoronto.ca dayt@zoo.utoronto.ca Dept. of Zoology, University of Toronto

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#74 Evolution of host/parasite interactions **Session Moderator: Gerald Borgia**
KCEC Grand Ballroom Salon C

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3:30-3:45 472 Egg size, sex, and host species: decisions of a parasitic cowbird
§*Strausberger, B. M. & Ashley, M. V.
bstrau1@icarus.uic.edu ashley@uic.edu University of Illinois @ Chicago

3:45-4:00 473 Blood parasite infection, disease resistance and mate choice in satin bowerbirds
***Gerald Borgia, Sabra Klein, and Gail Patricelli**
Borgia@umail.umd.edu Department of Biology, University of Maryland, College Park, MD 20742, Department of Immunology and Molecular Biology, School of Public Health, Johns Hopkins University, Baltimore MD 21205, and Department of Biology, University of Maryland, College Park, MD 20742

4:00-4:15 474 Molecular evidence for the independent evolution of non-parasitism in lampreys of the Klamath and Pit River basins
***Docker, M.F. & Heath, D.D.**
docker@uwindsor.ca,dheath@uwindsor.ca Great Lakes Institute for Environmental Research, University of Windsor, Windsor, Ontario, Canada.

4:15-4:30 475 Lateral Gene Transfer in Protists: Implications for the Evolution of Parasitism
***de Koning, A. & Keeling, P.**
dekoning@zoology.ubc.ca Departments of Zoology & Botany, University of British Columbia

4:30-4:45 476 Talk Relocated

4:45-5:00 477 Talk Relocated

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#75 Phylogeography **Session Moderator: Ronald J. Sarno**
KCEC Grand Ballroom Salon B

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3:30-3:45 478 The evolution and phylogeography of the African forest elephant (*Loxodonta africana cyclotis*)
***Eggert, L. S., Woodruff, D. S.**
leggert@biomail.ucsd.edu Ecology, Behavior and Evolution, University of California, San Diego 92093-0116

3:45-4:00 479 Phylogeography and subspecies assessment of vicuñas in Chile and Bolivia utilizing mtDNA and microsatellite markers: implications for vicuña conservation
***Sarno, R., Villalba, L., Bonacic, C., Gonzalez, B., Zapata, B., Mac Donald, D., O'Brien, S., & Johnson, W.**
rjsarno@mail.ncifcrf.gov Laboratory of Genomic Diversity, National Cancer Institute, Frederick, Maryland 21702-1201; Wildlife Conservation Research Unit, Oxford University, Wolfson College. OX2 6UD. Oxford, United Kingdom; Wildlife Conservation Research Unit, Oxford University, Wolfson College. OX2 6UD. Oxford, United Kingdom ; Facultad de Agronomía e Ingeniería Forestal, Pontificia Universidad Catolica de

(continued from the previous page) Chile, Casilla 306-22, Chile; Wildlife Conservation Research Unit, Oxford University, Wolfson College. OX2 6UD. Oxford, United Kingdom ; Wildlife Conservation Research Unit, Oxford University, Wolfson College. OX2 6UD. Oxford, United Kingdom Laboratory of Genomic Diversity, National Cancer Institute, Frederick, Maryland 21702-1201; Laboratory of Genomic Diversity, National Cancer Institute, Frederick, Maryland 21702-1201

4:00-4:15 480 Strong phylogeographic structure in a Caribbean reef fish with long-distance larval dispersal capability
Taylor, M.S.
mtayl22@lsu.edu Louisiana State University

4:15-4:30 481 Phylogeography and population genetics of the ruffe fish *Gymnocephalus cernuus*: Glacial refugia, the leading edge hypothesis, and exotic introductions
***Stepien, C. A. & Dillon, A.K.**
c.stepien@csuohio.edu Director, Great Lakes Environmental Genetics Laboratory and Research Professor, Center for Environmental Science, Technology, and Policy, Cleveland State University; Research Associate, Atherys, Inc.

4:30-4:45 482 Phylogeography of the sailfish, *Istiophorus platypterus*.
McDowell, J.R.
McDowell@vims.EDU Virginia Institute of Marine Science

4:45-5:00 483 Phylogeography of New Zealand galaxiid fish
***Wallis, G.P. & Waters,J.M.**
graham.wallis@stonebow.otago.ac.nz Dept of Zoology, Univ of Otago

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#76 Mating/breeding systems **Session Moderator: E. Elle**
KCEC Grand Ballroom Salon A

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3:30-3:45 484 Near-equality of variance in male and female reproductive success of modular organisms
Burd, M.
martin.burd@sci.monash.edu.au Department of Biological Sciences, Monash University, P.O. Box 18, Melbourne, Victoria 3800, Australia

3:45-4:00 485 Divergence among mating specificities
Uyenoyama, M. K.
marcy@duke.edu Department of Biology, Duke University, Durham, NC 27708-0338

4:00-4:15 486 The genetic basis of plasticity in the self-incompatibility system of *Campanula rapunculoides*.
***Stephenson, A. G., & Good-Avila, S.V.**
as4@psu.edu Department of Biology, The Pennsylvania State University, University Park, PA 16802

4:15-4:30 487 Development time, flower size, and the evolution of selfing in *Collinsia parviflora*
Elle, E.
elizabeth_elle@sfu.ca Simon Fraser University

4:30-4:45 488 Genetic causes and consequences of sexual variation in an invading aquatic plant
Keiko Lui; Faye L. Thompson; Kelly Bronson; *Christopher G. Eckert
eckertc@biology.queensu.ca, keikolui@hotmail.com, thompsnf@biology.queensu.ca Department of Biology, Queen's University, Kingston, Ontario K7L 3N6 Canada

4:45-5:00 489 New insights into the evolution of heterostyly and homostyly in *Primula* (Primulaceae) based on an extensive cpDNA phylogeny
§*Mast, A.R., Conti, E., Lang, D., and Feller, D.S.
AMast@access.unizh.ch Institute for Systematic Botany, University of Zurich, Zollikerstrasse 107, 8008 Zurich, Switzerland

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5:30-7:00 ASN: Presidential Address James Thompson "When is it Mutualism?"
KCEC Grand Ballroom

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7:30pm to 8:30pm Outreach Seminar--Richard Lewontin KCEC Grand Ballroom
"Coevolution of Organisms and the Environment"

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8:30pm to 11pm Dance Party Exhibit Hall 1

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SATURDAY SYMPOSIA AND CONTRIBUTED PAPERS

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#77 Symposium ASN: Consequences of infection for host evolution & ecology

Organizer: N. Moran

UT Conference Center Room 413ABC

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8:15-8:30 489 Overview: How symbionts and parasites shape the ecology and evolution of animals and plants
Nancy Moran
University of Arizona

8:30-9:00 490 Evolution of endophyte symbiosis in grasses and some ecological consequences
Keith Clay and C. Schardl
Indiana University

9:00-9:30 491 The interface of ecology and development in marine invertebrate symbioses
Margaret Mcfall-Ngai
University of Hawaii

9:30 - 10:00 492 The evolutionary ecology of the attine ant-microbe symbiosis
Ulrich Mueller
University of Texas

10:30-11:00 493 The role of symbiosis in host speciation
John Werren
University of Rochester

11:00-11:30 494 Parasites, host life history and the evolution of immunity
Marlene Zuk
University of California-Riverside

11:30-11:40 495 concluding remarks: **Moran**

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#78 Genomics

Session Moderator: B. Whitlock

Holiday Inn Tennessee Ballroom

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8:00-8:15 496 A multilocus view of sequence variation in the genome of *Arabidopsis thaliana*
***Schmid, K. and Mitchell-Olds, T.**
schmid@ice.mpg.de Department of Genetics and Evolution, Max-Planck-Institute for Chemical Ecology, Carl-Zeiss-Promenade 10, 07745 Jena

8:15-8:30 497 Primordialization; The process by which stable genes / invariant proteins determines the diversity of living forms
Mirabotalib Kazemie
kazemie @sympatico.ca University of Kabul

8:30-8:45 498 First generation linkage map for Heliconius erato wing colour pattern radiation.
Tobler, A., *Flanagan, NS., Heckel, DG.*, & McMillan, WO
flanagan@rrpac.upr.clu.edu Dept. de Biologia, Universidad de Puerto Rico - Rio Piedras, PO Box 23360, San Juan, Puerto Rico, PR00931-3360. *Department of Genetics, The University of Melbourne, Parkville, Victoria, 3052 AUSTRALIA.

8:45-9:00 499 Comparative Genomics at the Joint Genome Institute-Molecular Evolution on 20 million nucleotides per day
***Boore, Jeffrey L.**
boore1@llnl.gov DOE Joint Genome Institute

9:00-9:15 500 Assessment of ISSR band homology by southern hybridization with implications for data analysis and microsatellite development
***Datwyler, Shannon L. & Wolfe, Andrea D.**
datwyler.1@osu.edu; wolfe.205@osu.edu Department of Evolution, Ecology and Organismal Biology; Ohio State University

9:15-9:30 501 Comparison of nucleotide substitution rates among plastid, mitochondrial, and nuclear loci
§*Whitlock, B. A., Lee, J., Dombrovska O., Bernasconi-Quadroni, F., & Qiu, Y.L.
bwhitloc@bio.umass.edu Biology Department, University of Massachusetts, Amherst, MA 01003; Institute of Systematic Botany, University of Zurich, 8008 Zurich, Switzerland

9:30-9:45 502 Molecular evolution of ecologically important traits in *Arabidopsis* and *Arabis*
Mitchell-Olds, T.
tmo@ice.mpg.de Max Planck Institute of Chemical Ecology, Jena, Germany

9:45-10:00 503 Environmental Stress, Hsp Regulation and Evolution
***Loeschcke, V., Soerensen, J.G., Dahlgaard, J. & Kristensen, T.N.**
volker.loeschcke@biology.au.dk Dept. of Ecology and Genetics, University of Aarhus, 8000 Aarhus

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#79 Developmental evolutionary biology **Session Moderator: Hans Larsson**
KCEC Grand Ballroom Salon A

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8:00-8:15 504 Sister relationship of salamanders and mammals? Functional vs. Species Phylogenies from Germ Cell Genes
***White, M. E., Crother, B. I., Drum, M., Johnson, A.**
mwhite@selu.edu, bcrother@selu.edu Southeastern Louisiana University, Southeastern Louisiana University, Florida State University, Florida State University

8:15-8:30 505 Phenotypic and genetic integration during larval ontogeny in *Hyla chrysoscelis*
Allen, C. E.
callen@bio.indiana.edu Indiana University

8:45-9:00 506 Developmental theories of the origin and evolution of feathers
***Prum, R. O. & Williamson, S**
prum@ku.edu Department of Ecology and Evolutionary Biology, Natural History Museum, University of Kansas Lawrence, KS USA 66045

8:30-8:45 507 Comparative Analysis of Ectodermal Appendage Formation
***Harris, M.P., Prum, R.O. & Fallon, J.F.**
mpharri2@students.wisc.edu Program in Cell and Molecular Biology, Department of Anatomy, University of Wisconsin, Madison WI 53705; Department of Ecology and Evolutionary Biology, KU Natural History Museum, University of Kansas, Lawrence, KS, 66045; Department of Anatomy, University of Wisconsin, Madison WI 53705

9:00-9:15 508 Intra- and interspecific variation in ossification sequences in the poeciliid fishes *Xiphophorus helleri, X. maculatus*, and *Gambusia holbrooki*
***Higgins, C.L. and R.E. Strauss**
Chris.Higgins@ttu.edu & Rich.Strauss@ttu.edu Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409-3131

9:15-9:30 509 Ontogenetic dynamics of disparity
***Zelditch, M. L., Sheets, H. D. & W. L. Fink**
zelditch@umich.edu, sheets@canisius.edu, wlfink@umich.edu Museum of Paleontology, University of Michigan, Department of Physics, Canisius College, Museum of Zoology and Department of Biology, University of Michigan

9:30-9:45 510 The Burden of Homoplasy : Evolution and Development of Morphological Plasticity
§Hans Larsson
hans.larsson@yale.edu Department of Ecology and Evolutionary Biology, Yale University, 165 Prospect Street, New Haven, CT 06520; Department of Zoology University of Toronto, 25 Harbord Street, Toronto, ON M5S 3G5

9:45-10:00 511 Function-valued trait analysis of a behavioral ontogenetic trajectory
***Morgan, T.J., Cater P.A., & Garland T. Jr.**
tmorgan@mail.wsu.edu, pacarter@wsu.edu, tgarland@facstaff.wisc.edu Washington State University, School of Biological Sciences, Pullman, Washington 99164, Washington State University, School of Biological Sciences, Pullman, Washington 99164, University of Wisconsin-Madison, Department of Zoology, Madison, Wisconsin 53706

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#80 Hybridization **Session Moderator: A. C. Bouck**
KCEC Grand Ballroom Salon D

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8:00-8:15 512 Genetic structure of a broad diploid-polyploid birch (*BETULA*) hybrid zone
Williams, J. H. Jr & Arnold, M. L.
joe.williams@colorado.edu 1. Department of EPO Biology, University of Colorado, Boulder, CO 80309 2. Department of Genetics, University of Georgia, Athens, GA 30602

8:15-8:30 513 Random Amplified Polymorphic DNA Diversity in a Lodgepole - Jack Pine Hybrid Zone
***Ye, Z(a)., Yang, R.-C.(a,b) & Yeh, F.C.(a)**
zye@ualberta.ca; rongcai.yang@gov.ab.ca; francis.yeh@ualberta.ca (a) Department of Renewable Resources, University of Alberta, Edmonton AB Canada T6G 2H1 (b) Alberta Agriculture, Food and Rural Development, Edmonton AB Canada T6H 5T6

8:30-8:45 514 Natural Hybridization between an Endemic and a Naturalized Species of *Rubus* in the Hawaiian Islands
***Rebecca A. Randell & Clifford W. Morden**
rrandell@bio.indiana.edu Indiana University, Bloomington; University of Hawaii

8:45-9:00 515 Origins of hybrid lineages in North American *Houstonia*
***Sheri A. P. Church, Douglas R. Taylor**
sap3b@virginia.edu, drt3b@virginia.edu University of Virginia

9:00-9:15 516 Phenotypic diversity in traits relevant to reproductive isolation in Louisiana Iris hybrids
***Bouck, A.C., Koopman, R., Morgan, E., Peeler, R. and Arnold, M.L.**
bouck@arches.uga.edu, becca0120@hotmail.com, erinn@arches.uga.edu, rpeeler@arches.uga.edu, arnold@dogwood.botany.uga.edu
University of Georgia Department of Genetics

9:15-9:30 517 Dynamics of gene flow between *Penstemon davidsonii* and *P. rupicola*
***Datwyler, Shannon L. & Wolfe, Andrea D**
datwyler.1@osu.edu; wolfe.205@osu.edu Department of Evolution, Ecology and Organismal Biology; Ohio State University

9:30-9:45 518 Phylogeography and hybridization in the dwarf dogwood complex from the Pacific Northwest
***Xiang, Q.-Y. and Fan, C.-Z.**
jenny_xiang@ncsu.edu; cfan3@unity.ncsu.edu North Carolina State University

9:45-10:00 519 Novel phenotypic responses to flooding in hybrid genotypes of two Louisiana Iris species.
***Johnston, J. A., Donovan, L. A., and Arnold, M. L.**
johnston@dogwood.botany.uga.edu, donovan@dogwood.botany.uga.edu, arnold@dogwood.botany.uga.edu University of Georgia, Botany Department, Athens, GA 30602; University of Georgia, Genetics Department, Athens, GA 30602; University of Georgia, Botany Department, Athens, GA 30602

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#81 Molecular systematics **Session Moderator: Kobinah Abdul-Salim**
UT Conference Center Room 406

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8:00-8:15 520 The three genera of Hawaiian endemic mints are derived within North American *Stachys* (Lamiaceae)
***Lindqvist, C. & Albert, V. A**
charlotte_lindqvist@hotmail.com; victor.albert@ua.edu Biodiversity and Systematics, Department of Biological Sciences, The University of Alabama, Tuscaloosa, AL 35487-0345

8:15-8:30 521 Phylogenetics and Biogeography of Symphonia L. (Clusiaceae)
§Abdul-Salim, K.
kas@oeb.harvard.edu Department of Organismic and Evolutionary Biology, Harvard University

8:30-8:45 522 Evolution and diversification of plant resistance genes in *Arabidopsis thaliana*: A story of duplication, conversion, and genomic rearrangement
***Andrew M. Baumgarten, Russell E. Spangler, Georgiana May**
baum0217@umn.edu, gmay@umn.edu Department of Plant Biology, University of Minnesota, Department of Ecology, Evolution, and Animal Behavior, University of Minnesota, Department of Ecology, Evolution, and Animal Behavior, University of Minnesota

8:45-9:00 523 Molecular rates parallel diversification contrasts between carnivorous plant sister lineages in Lentibulariaceae
Jobson, R. W. & *Albert, V. A.
r.jobson@botany.uq.edu.au; victor.albert@ua.edu Department of Botany, The University of Queensland, Brisbane, QLD 4072, Australia; Biodiversity and Systematics, Department of Biological Sciences, The University of Alabama, Tuscaloosa, AL 35487-0345

9:00-9:15 524 ITS2 rRNA: secondary structure and diagnostic potential for fungi
Gargas, Andrea
agargas@facstaff.wisc.edu Department of Botany, University of Wisconsin-Madison

9:15-9:30 525 Biogeographical patterns in mushrooms
***Hughes, K . W., Petersen, R.H. & Lickey, E.**
khughes@utk.edu, repete@utk.edu, elickey@utk.edu Department of Botany, University of Tennessee, Knoxville, TN 37996-1100

9:30-9:45 526 Regional patterns of genetic variability in limber pine
***Jorgensen, S. M., Hamrick, J. L., Wells, P. V.**
jorgie@uga.edu; hamrick@dogwood.botany.uga.edu Department of Geography, The University of Georgia, Departments of Botany and Genetics, The University of Georgia, Department of Botany, University of Kansas

9:45-10:00 527 Immigration AND in situ glacial survival in the low-alpine *Erinus alpinus*?
§*Stehlik, I., Schneller, J.J. & Bachmann, K.
ivana@systbot.unizh.ch Institute of Systematic Botany, University of Zurich, Zollikerstrasse 107, CH-8008 Zürich, Switzerland; Institute of Systematic Botany, University of Zurich, Zollikerstrasse 107, CH-8008 Zürich, Switzerland; Institute of Plant Genetics and Crop Plant Research, IPK Gatersleben, Corrensstr. 3, D-06466 Gatersleben, Germany

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#82 Mechanisms of reproductive isolation **Session Moderator: Kai Chan**
KCEC Grand Ballroom Salon B

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8:30-8:45 528 Ecospecies and Mitochondrial DNA Integrity: The Cichlid Story You Don't Hear
§Chan, Kai M. A.
kaichan@princeton.edu Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544-1003

8:45-9:00 529 No evidence for parallel evolution of male courtship colors in cichlid species of the *Pseudotropheus* (Metriaclima) and P. (Tropheops) complexes from north western Lake Malawi.
***Ciro Rico~, Pierre Bouteillon~, Madeleine J.H. van Oppen~1, Mairi E. Knight†, Godfrey M. Hewitt~ & George F. Turner†**
c.rico@uea.ac.uk ~ School of Biological Sciences, University of East

(continued from previous page) Anglia, Norwich, NR4 7TJ, UK † University of Hull School of Biological Sciences Cottingham Road Hull HU6 7RX UK 1Present address: Department of Biochemistry and Molecular Biology, James Cook University, Townsville 4811, Australia

9:00-9:15 530 Divergent sexual selection and the evolution of reproductive isolation
Boughman, Janette Wenrick
boughman@zoology.ubc.ca Department of Zoology, University of British Columbia, Vancouver, BC V6T 1Z4 Canada

9:15-9:30 531 Sexual isolation evolves faster than postmating isolation in a sexually dimorphic genus of fish (Etheostoma, Perciformes)
Tamra Mendelson
tcm6@duke.edu Duke University, currently University of Maryland

9:30-9:45 532 Ambient noise drives bird song divergence over an ecological gradient
***Slabbekoorn, H.& Smith, T.**
Slabbeko@SFSU.EDU Center for Tropical Research, San Francisco State University, San Francisco, CA 94132

9:45-10:00 533 Rapid chromosomal evolution in house mice from the island of Madeira
***Britton-Davidian, J.(1), Catalan, J.(1), Ramalhinho, M. G.(2), Ganem, G.(1), Auffray, J.-C.(1), Searle, J. B. (3) & Mathias, M. L.(4)**
britton@isem.univ-montp2.fr (1) ISEM, Lab. Génétique & Environnement, Université MontpellierII, Montpellier, France, (2) Centro de Biologia Ambiental, MNHN, Lisboa, Portugal, (3) University of York, York, Great Britain, (4) Departamento de Zoologia e Anthropologia, FCUL, Lisboa, Portugal

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#83 Molecular systematics **Session Moderator: L. Dries**
KCEC Grand Ballroom Salon C

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8:15-8:30 534 A Molecular Phylogeny of Squamates Based on Mitochondrial and Nuclear DNA Sequences
§Townsend, T.
townsend@biology.wustl.edu Washington University in St. Louis

8:30-8:45 535 Molecular Systematics of the Eastern Fence Lizard (*Sceloporus undulatus*): A Bayesian Approach
§Leache, A. D.
aleach1@lsu.edu Museum of Natural Science, Louisiana State University

8:45-9:00 536 Molecular systematics of the *Plethodon elongatus* (Plethodontidae) species complex
Mahoney, M. J.
mahoney@amnh.org Department of Herpetology, American Museum of Natural History, New York, NY

9:00-9:15 537 Nuclear gene duplications support a traditional view of vertebrate phylogeny
§*Cotton, J. A. & Page, R. D. M.
j.cotton@udcf.gla.ac.uk; r.page@bio.gla.ac.uk Division of Environmental and Evolutionary Biology, Insitute of Biomedical and Life Sciences, University of Glasgow

9:15-9:30 538 Parallel partial gene duplication events in the mitochondrial genomes of some triakid sharks
***Lopez, J.A.; Fedrigo, O; Ryburn, J.A.; Naylor, G.**
andresl@iastate.edu, ofedrigo@iastate.edu, juls@iastate.edu, gnaylor@iastate.edu Department of Zoology and Genetics, Iowa State University

9:30-9:45 539 Discovery and phylogenetic analysis of a riverine species flock of African electric fishes (Mormyridae, Teleostei)
***Sullivan, J.P.; Lavoué, S.; Arnegard, M.; Teugels, G.; Hopkins, C.D.**
mormyrid@amnh.org Sullivan: Cornell University, Ithaca, NY and American Museum of Natural History, New York , NY; Lavoué: Museum d'Histoire Naturelle, Paris, France; Arnegard: Cornell University, Ithaca, NY; Teugels: Africa Museum, Tervuren, Belgium; Hopkins: Cornell University, Ithaca, NY

9:45-10:00 540 Swords, Roots, and Reliability: The Xiphophorus Molecular Phylogeny Revisited
Dries, L.
dries@lifesci.ucsb.edu University of California - Santa Barbara

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Saturday late morning: 10:30am – 12noon

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#77 Symposium ASN: Consequences of infection for host evolution, continued
UT Conference Center Room 413 ABC

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#84 Molecular evolution **Session Moderator: A. Lawton-Rauh**
KCEC Grand Ballroom Salon A

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10:30-10:45 541 New evidence for strong selection on plant chitinases and their role in an arms race
Bishop, J.G.
bishop@vancouver.wsu.edu Washington State University

10:30-10:45 542 Gene trees in two *Silene* species across Europe: nuclear vs. cytoplasmic diversity
***Pelle K. Ingvarsson & Douglas R. Taylor**
pki3h@virginia.edu, drt3b@virginia.edu Department of Biology, University of Virginia, Charlottesville, VA 22904

10:45-11:00 543 Breakdown of concerted evolution in the nuclear ribosomal repeat: Interesting results from the external transcribed spacer region of *Cercocarpus* (Rosaceae)
***Vanden Heuvel, B. & Linder, C.R.**
bvanden@mail.utexas.edu rlinder@mail.utexas.edu Section of Integrative Biology, The University of Texas at Austin, Austin, TX

11:00-11:15 544 Molecular Evolution and Population Genetics of Floral Homeotic Genes in the Hawaiian Silversword Alliance
***Lawton-Rauh, A., Robichaux, R. H. & Purugganan, M. D.**
allawton@unity.ncsu.edu, robichau@u.arizona.edu, michael_purugganan@ncsu.edu North Carolina State University Dept. of Genetics, University of Arizona-Tucson Dept. of Ecology and Evolutionary Biology, North Carolina State University Dept. of Genetics

11:15-11:30 545 Divergence rates of genes in the genera *Antirrhinum* and *Verbascum*
***Deborah Charlesworth & Cristina Vieira**
deborah.Charlesworth@ed.ac.uk Institute of Cell, Animal and Population Biology, University of Edinburgh, Ashworth Lab. King's Buildings, W. Mains Rd., Edinburgh EH9 3JT, UK

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#85 Biogeography/geographic variation **Session Moderator: S. Gilman**
KCEC Grand Ballroom Salon B

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10:30-10:45 546 Talk Cancelled

10:45-11:00 547 Interpreting patterns of genetic differentiation in the endangered mussel *Cyprogenia aberti* using mitochondrial and nuclear sequences
Serb, J.M.
serb001@bama.ua.edu Department of Biological Sciences, University of Alabama

11:00-11:15 548 Correlated Morphologic and Genetic Variation of a Gorgonian Coral in the Bahamas
***Gutiérrez-Rodríguez C., Downey K. & Lakser, H.R.**
cg8@buffalo.edu State University of New York at Buffalo

11:15-11:30 549 Local adaptation does not determine the range limit of an intertidal snail
Gilman, S. E.
segilman@ucdavis.edu University of California, Davis

11:30-11:45 550 Evidence of a large scale cryptic invasion of the Atlantic by *Ophiactis savignyi* (Ophiuroidea)
***Roy, M.S. & Sponer, R.**
michael.roy@stonebow.otago.ac.nz Dept. Zoology, University of Otago, PO Box 56, Dunedin, New Zealand

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#86 Systematics- plants & arthropods
KCEC Grand Ballroom Salon C

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10:30-10:45 551 Expressed sequence tags for molecular systematics of beetles
Vogler A.P., Theodorides, K. & Gomez-Zurita, J.
a.vogler@nhm.ac.uk Department of Entomology, The Natural History Museum, Cromwell Road, London, SW7 5BD, U.K. & Department of Biology, Imperial College at Silwood Park, Ascot SL7 PY, U.K.

10:45-11:00 552 Evolution of floral morphology in the legume tribe Amorpheae
§*McMahon, M. & L. Hufford
mmcmahon@mail.wsu.edu Washington State University

11:00-11:15 553 Will we ever unravel basal angiosperm relationships?
***Zanis, M. J.#, Soltis, D. E.^ & Soltis, P. S^**
mzanis@wsunix.wsu.edu #School of Biological Sciences, Washington State University, Pullman, WA 99164; ^Department of Botany and the Genetics Institute, University of Florida, Gainesville, FL 32611 USA; ^Florida Museum of Natural History and the Genetics Institute, University of Florida, Gainesville, FL 32611 USA

11:15-11:30 554 The evolution of North American *Elymus* (Poaceae) allotetraploids: evidence from phosphoenolpyruvate carboxylase (PEPC) gene sequences
***Helfgott, D.M. & Mason-Gamer, R.J.**
dione_megan_helfgott@hotmail.com and robie@uidaho.edu University of Idaho

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#87 Systematics **Session Moderator: B. Jennings**
KCEC Grand Ballroom Salon D

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10:30-10:45 555 Midgets and Monsters: the extinct Paleozoic *Arthropleuridea* and their phylogenetic position within Diplopoda
Wilson, H. M.
wilsonhm@wam.umd.edu Department of Entomology, University of Maryland, College Park

10:45-11:00 556 The performance of phylogenetic methods on data simulated using a complex model of evolution
§Holder, M. T.
mtholder@mail.utexas.edu Section of Integrative Biology, and Institute of Cellular and Molecular Biology, University of Texas

11:00-11:15 557 Phylogenetic Signal as a Criterion for Combining Data Sets
James Lyons-Weiler
Center for Bioinformatics and Computation Biology, University of Massachusetts, Lowell, Lowell, MA 01854 James_LyonsWeiler@uml.edu

11:15-11:30 558 Missing data and phylogenetic accuracy
Wiens, J. J.
wiensj@carnegiemuseums.org Carnegie Museum of Natural History, Pittsburgh, PA 15213-4080

11:30-11:45 559 From aegyptiaca to ventricosa - Reevaluating the assumptions of globotruncanid systematics
§Spector, Daniel
dspect01@fiu.edu, danspector@aol.com Dept. of Earth Sciences, Florida International University

11:45-12:00 560 Phylogeny, ecology, and the nature of cladogenesis in Australian pygopodid lizards
§Jennings, B.
jennings@mail.utexas.edu Section of Integrative Biology, University of Texas at Austin, Austin, TX 78712 USA

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#88 Phenotypic plasticity and GxE & Evolution of correlations **Session Moderator: D. Ackerly**
Holiday Inn Tennessee Ballroom

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10:30-10:45 561 Evolution of uncorrelated traits: it's harder than you think
Ackerly, D.D.
dackerly@stanford.edu Department of Biological Sciences, Stanford Univ., Stanford CA 94305

10:45-11:00 562 Matrix Comparison: Beyond Common Principle Components
***Mezey, J. and Houle, D.**
mezey@bio.fsu.edu, dhoule@bio.fsu.edu Florida State University (Tallahassee)

11:00-11:15 563 The genetic basis for correlations between traits in *Begonia dregei*
McLellan, T.
108trm@cosmos.wits.ac.za School of Molecular and Cell Biology, University of the Witwatersrand

11:15-11:30 564 Postmetamorphic cost of larval inducible defenses in western toads (Bufonidae: *Bufo boreas*).
***Benard, M. F., & Fordyce, J. A.**
mfbenard@ucdavis.edu, jafordyce@ucdavis.edu Center for Population Biology, Section of Evolution and Ecology University of California Davis, CA 95616

11:30-11:45 565 Variability in the threshold trait related to a conditional strategy: when to fight and when to sneak in Atlantic salmon males.
***Aubin-Horth, N. & Dodson, J. J.**
Nadia.Aubin-Horth@giroq.ulaval.ca; Julian.Dodson@bio.ulaval.ca Centre interuniversitaire de recherche sur le saumon Atlantique (CIRSA), Université Laval, Québec, Québec, Canada

11:45-12:00 566 Experimental evidence for adaptation vs. acclimation in the sea urchin heat-shock response
Podolsky, R. D.
podolsky@unc.edu University of North Carolina, Chapel Hill

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Saturday early afternoon: 1:15pm to 3pm

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#89 Life history evolution **Session Moderator: D. Roach**
KCEC Grand Ballroom Salon A

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1:15-1:30 567 Aging in mice selectively bred for increased voluntary exercise: implications for the evolution of senescence
***Bronikowski, A., Morgan, T., Garland, T. Jr., & Carter P. A.**
abonikowski@facstaff.wisc.edu Dept. of Zoology, U. Wisconsin, Madison WI; School of Biological Sciences, Washington State U., Pullman WA; Dept. of Zoology, U. Wisconsin, Madison WI; School of Biological Sciences, Washington State U., Pullman WA

1:30-1:45 568 A new theory for the evolution of senescence
Promislow, D.
promislow@uga.edu University of Georgia

1:45-2:00 569 Age-dependent mortality in a natural plant population
Roach, Deborah
droach@virginia.edu Department of Biology, University of Virginia

2:00-2:15 570 Life-history evolution in an arbovirus
***Vasi Attar, F & Novella, I**
fattar@mco.edu Medical College of Ohio

2:15-2:30 571 Masting and the maintenance of genetic variation in red squirrels
***McAdam, A. & Boutin, S.**
amcadam@ualberta.ca, stan.boutin@ualberta.ca Department of Biological Sciences, University of Alberta, Edmonton, Alberta, CANADA T6G 2E9

2:30-2:45 572 Phenotypic selection on body size and locomotor performance
Miles, D. B.
dmiles2@ohio.edu Department of Biology, Ohio University, Athens, Ohio 45701

2:45-3:00 573 Competitive stress and selection on immune function in genetic lizard morphs
***Svensson, E., Sinervo, B. & Comendant, T.**
erik.svensson@zooekol.lu.se 1. Department of Animal Ecology, Ecology Building, Lund University, S-223 62 Lund, SWEDEN. 2. Department of Ecology & Evolutionary Biology, UCSC, CA 95064

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#90 Phenotypic plasticity and GxE **Session Moderator: C. Baer**
KCEC Grand Ballroom Salon B

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1:15-1:30 574 Comparative studies of plasticity and evolution in snakes
Burghardt, Gordon M.
gburghar@utk.edu Departments of Psychology and Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN 37996

1:30-1:45 575 Effects of PGI genotype and heat exposure on thermal tolerance of a montane leaf beetle
***Neargarder, G., Dahlhoff, E., & Rank, N. E.**
neargard@students.sonoma.edu; edahlhoff@scu.edu; rank@sonoma.edu Sonoma State University, CA; Santa Clara University, CA; Sonoma State University, CA

1:45-2:00 576 How is an insect the size that it is? regulation of body size and its plasticity
***Davidowitz, G. & Nijhout, H. F.**
goggy@email.arizona.edu, hfn@duke.edu Dept. of Ecology and Evolutionary Biology, University of Arizona, Dept. of Biology, Duke University

2:00-2:15 577 Genes and environment influence pea aphid resistance to natural enemy attack
Fellowes, M.D.E.
m.fellowes@reading.ac.uk University of Reading, UK

2:15-2:30 578 Natural selection on continuous reaction norms: thermal sensitivity of caterpillar growth
Kingsolver, J. G.
jgking@bio.unc.edu University of North Carolina

2:30-2:45 579 Trade-offs in Resistance: How Resistance to Herbicide Affects Susceptibility to Herbivores
Gassmann, A. J.
gassmann@life.bio.sunysb.edu Department of Ecology and Evolution, SUNY-Stony Brook, Stony Brook, NY 11794-5245

2:45-3:00 580 Gee, Max? Dis/Concordance of Within- and Between-Population Genetic Correlations with Body Size in *Daphnia pulicaria*.
***Baer, C., and Lynch, M.**
cbaer@darkwing.uoregon.edu, mlynch@oregon.uoregon.edu University of Oregon

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#91 Plant reproductive biology **Session Moderator: Shanna Carney**
Holiday Inn Tennessee Ballroom

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1:15-1:30 581 Correlated responses to artificial selection on flower size and number
***Delph, L.F., Gehring, J.L. & Levri, M.**
ldelph@bio.indiana.edu Department of Biology, Indiana University

1:30-1:45 582 Patterns of phenotypic selection using different fitness measures in five populations of *Viola blanda*
Sudler, K.N.
kaynic43@hotmail.com University of Kentucky, School of Biological Sciences

1:45-2:00 583 Selection for Floral Sex Ratio in *Solanum carolinense*: Potential Impact of Floral Herbivory
Wise, M.J.
mjw3@duke.edu Duke University

2:00-2:15 584 Paternity analysis shows that hermaphrodites function as males in the androdioecious *Phillyrea angustifolia*
***Vassiliadis, C., Saumitou-Laprade, P., Lepart, J., Viard, F.**
cv5@st-andrews.ac.uk; saumitou@univ-lille1.fr; lepart@cefe.cnrs-mop.fr; viard@sb-roscoff.fr Sir Harold Mitchell Building, Institute of Environmental & Evolutionary Biology, University of St Andrews, St Andrews, Fife, KY16 9TH, UK.; Laboratoire de Génétique et Evolution des Populations Végétales, UPRESA CNRS 8016, Université Lille 1, Bâtiment SN2, 59655 Villeneuve d'Ascq Cedex, France. ; Centre d'Ecologie Fonctionnelle et Evolutive, UPR 9056 du CNRS, 1919 route de Mende, 34293 Montpellier Cedex 5, France. ; Station Biologique de Roscoff, Place Georges-Teissier, BP74, 29682 Roscoff, France

2:15-2:30 585 Evolutionary Ecology of *Agave lechuguilla*: correlations among population genetics, reproductive ecology and morphology.
***Eguiarte, L.E. & Silva, A.**
fruns@servidor.unam.mx Departamento de Ecología Evolutiva, Instituto de Ecología, Universidad Nacional Autónoma de México (UNAM).

2:30-2:45 586 Argentine ant invasions and seed dispersal in California
Carney, S. E.
secarney@lamar.colostate.edu Colorado State University

2:45-3:00 587 Adaptive evolution of floral traits in *Lobelia siphilitica* and *L. cardinalis*
***Caruso, C. M. and Ridley, C**
carusoc@grinnell.edu Department of Biology, Grinnell College, Grinnell, IA 50112

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#92 Population genetics- theory **Session Moderator: M. Orive**
UT Conference Center Room 406

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1:15-1:30 588 The correlation between relatives on the supposition of genomic imprinting
Spencer, Hamish G.
h.spencer@otago.ac.nz Department of Zoology, University of Otago, Dunedin, New Zealand

1:30-1:45 589 Multipoint Linkage Disequilibrium Mapping in the Context of a Human Genome Sequence
Rannala, B. & *Reeve, J.
brannala@ualberta.ca, jreeve@ualberta.ca University of Alberta

1:45-2:00 590 Save the data! A community database for population genetics
Neigel, J.
jneigel@louisiana.edu Department of Biology, University of Louisiana at Lafayette

2:00-2:15 591 Computational evolutionary methods for serial samples of molecular sequences
§*Drummond, A., Nicholls, G. & Rodrigo, A.
a.drummond@auckland.ac.nz University of Auckland, Auckland, New Zealand

2:15-2:30 592 Does your study system deviate from island-model structure? Tests using codominant or dominant markers
Porter, A.
aporter@ent.umass.edu Entomology Dept., Univ. Massachusetts-Amherst

2:30-2:45 593 An Evolutionary Genetic Model of the Ovarian Time-Bomb Hypothesis for the Evolution of Genomic Imprinting
***Weisstein, A.E.; Feldman, M.W.; & Spencer, H.G.**
anton.weisstein@stonebow.otago.ac.nz Department of Zoology, University of Otago, Dunedin, New Zealand; Department of Biological Sciences, Stanford University, Stanford, CA 94305, U.S.A.; Department of Zoology, University of Otago, Dunedin, New Zealand.

2:45-3:00 594 Dicytoplasmic vs. cytonuclear data: Which is better for estimating pollen and seed migration rates?
***Orive, M. E., Asmussen, M. A.**
orive@ukans.edu Dept. of Ecology and Evolutionary Biology, University of Kansas, Dept. of Genetics, University of Georgia

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#93 Molecular systematics **Session Moderator: P. Beresford**
KCEC Grand Ballroom Salon C

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1:15-1:30 595 The deeper history of birds of the African rainforest implied by molecular phylogenies of pycnonotid species
Beresford, P.
pb@amnh.org American Museum of Natural History, City University of New York

1:30-1:45 596 Avian ordinal phylogeny and rooting with gametologs
***Mindell, D. P., Sorenson, M. D., and Garcia-Moreno, J.**
mindell@umich.edu, msoren@bu.edu, Jaime.Garcia-Moreno@uni-konstanz.de University of Michigan, Museum of Zoology and Department of Ecology and Evolutionary Biology, Ann Arbor, MI 48109 USA; Boston University, Department of Biology, Boston MA, 02215 USA; Max Planck Research Centre for Ornithology, and Department of Evolutionary Biology, University of Konstanz, D78457 Konstanz, GERMANY

1:45-2:00 597 Phylogeny of an extinct Hawaiian bird radiation based on mtDNA
Robert C. Fleischer
fleischerr@nzp.si.edu National Museum of Natural History, Smithsonian Institution

2:00-2:15 598 Molecular Versus Morphological Evolution in Calidridine Sandpipers
***Greenslade, A. D. & Baker. A. J.**
adg@zoo.utoronto.ca allanb@rom.on.ca University of Toronto; Royal Ontario Museum & University of Toronto

2:15-2:30 599 Complete Mitochondrial DNA Genome Sequences of Extinct Birds: Ratite Phylogenetics and the Vicariance Biogeography Hypothesis
§*Haddrath, O. & Baker A. J.
oliverh@rom.on.ca Centre for Biodiversity and Conservation Biology, Royal Ontario Museum & Centre for Biodiversity and Conservation Biology, Royal Ontario Museum; Dept. of Zoology, University of Toronto

2:30-2:45 600 Molecular Systematics of the Catharus Thrush Complex: Implications for the Evolution of Avian Migratory Behavior
§*Outlaw, D., B. Mila and D. Girman
dianaoutlaw@earthlink.net; bmila@excite.com; girman@sonoma.edu Department of Biology, Sonoma State University and Department of Biology, University of Nevada Las Vegas; Department of Organismic Biology, University of California Los Angeles; Department of Biology, Sonoma State University

2:45-3:00 601 Talk Cancelled

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#94 Hybridization **Session Moderator: R. Strange**
KCEC Grand Ballroom Salon D

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1:15-1:30 602 Hybrid Zone Structure and its' impact on evolutionary process
***Braswell, W.E. & Howard, D.J.**
wbraswel@nmsu.edu Affiliations Department of Biology, New Mexico State, University, Las Cruces, NM 88003

1:30-1:45 603 Genetics of the Northern Oriole Hybrid Zone
Allen, E. S
ersander@indiana.edu Indiana University

1:45-2:00 604 Unidirectional introgression of mtDNA markers in spottail darters (Osteichthyes: Percidae): field testing sensory bias and co-evolutionary hypotheses)
Strange, R.
rstrange@biology.semo.edu Department of Biology, Southeast Missouri State University, Cape Girardeau, MO 63701, USA

2:00-2:15 605 Genetic and phenotypic consequences of hybridization in a bimodal hybrid zone between red deer and sika deer (genus *Cervus)* in Argyll, Scotland
***Goodman SJ, Barton NH, Swanson GM, Pemberton JM**
simon.goodman@ioz.ac.uk Institute of Zoology, Zoological Society of London, UK Institute of Cell, Animal and Population Biology, University of Edinburgh, UK Institute of Cell, Animal and Population Biology, University of Edinburgh, UK Institute of Cell, Animal and Population Biology, University of Edinburgh, UK

2:15-2:30 606 Hydrographic patterns and directional selection maintain population boundaries in a blue mussel hybrid zone
***Gilg, M.R. and Hilbish, T.J.**
gilg@biol.sc.edu; hilbish@biol.sc.edu University of South Carolina

2:30-2:45 607 Phenotypic conservation despite massive genetic introgression in the *Mytilus edulis* species complex
***Riginos, C., Sukhdeo, K., Cunningham, C.W.**
riginos@duke.edu, ks8@duke.edu, cliff@duke.edu Duke University

2:45-3:00 608 The Differential Effects of Pre- and Postzygotic Isolation on the Introgression of Chloroplast/Mitochondrial vs. Nuclear DNA Chan,
§Chan, Kai M. A.
kaichan@princeton.edu Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544-1003

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Saturday late afternoon 3:30pm to 5pm

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#95 Ecological genetics **Session Moderator: Lara Carroll**
Holiday Inn Tennessee Ballroom

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3:30-3:45 609 Frequency and body-color affect fitness and mating behavior in male mosquitofish
Lisa Horth
horth@neuro.fsu.edu Florida State University

3:45-4:00 610 Fitness Effects of a Selfish Gene are Revealed in an Ecological Context
***Carroll,L., Meagher,S., Morrison,L., & Potts,W.**
carroll@biology.utah.edu Biology Dept. University of Utah; Biological Sciences Dept. Western Illinois University; Biology Dept. University of Utah; Biology Dept. University of Utah

4:00-4:15 611 The evolution of polymorphisms maintained by frequency-dependence in asexual populations of *Saccharomyces cerevisiae*
Campbell, S. & *Zeyl, C.
sksoup@hotmail.com, zeylcw@wfu.edu Department of Biology, Wake Forest University, Winston-Salem NC 27109

4:15-4:30 612 Neutral and non-neutral evolution in the little greenbul (*Andropadus virens*)
***Aguilar, A., Wayne, R. K.**
aguilara@ucla.edu Department of Organismic Biology, Ecology & Evolution, UCLA

4:30-4:45 613 Male satin bowerbirds display near their relatives
***Dryer, K., Bollback, J.P., Coleman, S.W., Patricelli, G.L., Uy, J.A.C., Braun, M.J., Borgia, G.**
kd94@umail.umd.edu Department of Biology, University of Maryland/Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution; Department of Biology, University of Maryland/Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution; Department of Biology, University of Maryland; Department of Biology, University of Maryland; Department of Biology, University of Maryland; Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution/Department of Biology, University of Maryland;

(continued from previous page) Department of Biology, University of Maryland Note on author affiliation: K. Dryer, J.P. Bollback and M.J. Braun are affiliated with both the Department of Biology, University of Maryland and the Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution

4:45-5:00 614 Population size, reproductive success and genetic variability in bank voles, *Clethrionomys glareolus*
***Grapputo A., Koskela E. & Mappes T.**
grapputo@cc.jyu.fi Department of Biological and Environmental Science, University of Jyväskylä P.O. Box 35, Ambiotica 40351 Jyväskylä Finland

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#96 Developmental evolutionary biology **Session Moderator: C. C. Maley**
KCEC Grand Ballroom Salon D

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3:30-3:45 615 Evolution and development of dimorphic nuclei in ciliates
Katz, L.A. & Lasek-Nesselquist, E.
LKatz@Smith.edu Dept. Biol. Sciences, Smith College & Program in Organismic and Evolutionary Biology, UMass-Amherst; Dept. Biological Sciences, Smith College

3:45-4:00 616 Ecological interactions and Evolutionary systems
Maurice S. Devaraj
mauricesdevaraj@yahoo.com None

4:00-4:15 617 Cancer as a product of somatic evolution: the role of cell differentiation
***Pepper, J.W. & Maley, C.C.**
jpepper@santafe.edu, cmaley@alum.mit.edu Santa Fe Institute, Fred Hutchinson Cancer Research Center

4:15-4:30 618 Somatic Evolution and Selective Sweeps in Barrett's Esophagus Neoplasia
***Maley, C.C., Prevo, L.J., Galipeau, P.C., Sanchez, C.A., Paulson, T.G., Barrett, M.T., Blount, P.L., Reid, B.J.**
cmaley@alum.mit.edu Fred Hutchinson Cancer Research Center

4:30-4:45 619 Phylogenetic evidence for parallel heterochronic evolution in skinks of the *Eumeces skiltonianus* species complex (Squamata: Scincidae)
§*Richmond, J. Q. and T. W. Reeder
Department of Biology San Diego State University 5500 Campanile Drive Sann Diego, CA. 92182-4614 Jonathan Richmond's current address is: Ecology and Evolutionary Biology University of Connecticut 75N Eagleville Rd. Storrs, CT. 06268-3043

4:45-5:00 620 Rapid Coevolution of Interacting Proteins Controlling Nematode Sex Determination
***Haag, E.S., Wang, S.P., & Kimble, J.**
ehaag@biochem.wisc.edu Department of Biochemistry and HHMI, University of Wisconsin, Madison USA

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#97 Evolution of host/parasite interactions **Session Moderator: Jerry C. Hinn**
KCEC Grand Ballroom Salon A

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3:30-3:45 621 *Wolbachia* and the evolution of cytoplasmic incompatibility in *Nasonia*
***Bordenstein, S.R., Uy, J. & Werren, J.H.**
sbst@troi.cc.rochester.edu University of Rochester, Biology Department, Rochester, NY 14627

3:45-4:00 622 Host diversity and speciation of slave-making ants
Savolainen, R.
riitta.savolainen@helsinki.fi Department of Ecology and Systematics, University of Helsinki, Finland

4:00-4:15 623 Evolution of host range and virulence in *Drosophila-parasitic* nematodes
***Perlman, S.J. and Jaenike, J.**
sperlman@u.arizona.edu Dept. of Ecology and Evolutionary Biology University of Arizona

4:15-4:30 624 *Wolbachia*-mediated increases in survival suggest a role for mutualism in the *Wolbachia-Drosophila* symbiosis
***Fry, A.J. and D.M. Rand**
Adam_Fry@Brown.edu, David_Rand@Brown.edu Brown University

4:30-4:45 625 Experimental evidence for genetic tradeoffs between different components of resistance against the same parasite
***Hinn, J. C. & Polak, M.**
hinnj@email.uc.edu, polakm@email.uc.edu Both: University of Cincinnati, Department of Biological Sciences

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#98 Evolution of behavior **Session Moderator: S. Mesnick**
KCEC Grand Ballroom Salon B

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3:30-3:45 626 Evolution of intraspecific cooperation in spatially distributed populations
Haygood, R.
rhaygood@ucdavis.edu Center for Population Biology, University of California, Davis, CA 95616

3:45-4:00 627 Reconciling behavior with phylogeny
***Kennedy, M., Paterson, A.M. & Page R.D.M.**
martyn.kennedy@udcf.gla.ac.uk D.E.E.B., I.B.L.S., University of Glasgow, Glasgow G12 8QQ, U.K., Ecology and Entomology Group, Lincoln University, PO Box 84, Lincoln, New Zealand; D.E.E.B., I.B.L.S., University of Glasgow, Glasgow G12 8QQ, U.K.

4:00-4:15 628 The Effects of Activity and Early-Age Activity Selection on Metabolic Traits in Aged Mice (*Mus domesticus*)
***Kane, S. L., Garland, T. Jr., and Carter, P.A.**
slkane@mail.wsu.edu, pacarter@mail.wsu.edu Washington State University, School of Biological Sciences, Pullman, WA 99164-4236; University of Wisconsin, Madison, Department of Zoology, Madison, WI 52706; Washington State University, School of Biological Sciences, Pullman, WA 99164-4236

4:15-4:30 629 Promiscuity and the Primate Immune System
***Nunn, C.L., Gittleman, J.G., Antonovics, J.**
cln3b@virginia.edu, JLGittleman@virginia.edu, ja8n@Virginia.EDU
Department of Biology, University of Virginia, Charlottesville VA 22904;

4:30-4:45 630 Allometric constraints on the evolution of display complexity: large lizards have simple visual displays
***Ord, Terry J. & Blumstein, Daniel T.**
terry@galliform.psy.mq.edu.au Department of Biological Sciences, Macquarie University, Sydney NSW Australia 2109, Department of Organismic Biology, Ecology and Evolution, University of California, Los Angeles CA 90095-1606

4:45-5:00 631 Sperm whale social structure: kith or kin?
***Mesnick, S. L., Evans, K., Taylor, B. L., Hyde, J. Escorza, S. & Dizon, A.E.**
Sarah.Mesnick@noaa.gov Molecular Ecology Group, Southwest Fisheries Science Center, National Marine Fisheries Service - NOAA, P. O. Box 271, La Jolla, CA 92038, Department of Zoology, University of Tasmania, GPO Box 252-05, Hobart, Tasmania, Australia 7001, Molecular Ecology Group, Southwest Fisheries Science Center, National Marine Fisheries Service - NOAA, P. O. Box 271, La Jolla, CA 92038, Molecular Ecology Group, Southwest Fisheries Science Center, National Marine Fisheries Service - NOAA, P. O. Box 271, La Jolla, CA 92038, Molecular Ecology Group, Southwest Fisheries Science Center, National Marine Fisheries Service - NOAA, P. O. Box 271, La Jolla, CA 92038

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#99 Mechanisms of reproductive isolation **Session Moderator: L. B. Geyer**
KCEC Grand Ballroom Salon C

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3:30-3:45 632 Talk Cancelled

3:45-4:00 633 Density-dependent sexual selection and reproductive isolation among sea urchin species
Levitan, D.R.
levitan@bio.fsu.edu Department of Biological Science, Florida State University

4:00-4:15 634 Reproductive Character Displacement and the Genetics of Prezygotic Isolation in Tropical Sea Urchins (Echinometra)
***Geyer, L.B. and Palumbi, S. R.**
lgeyer@oeb.harvard.edu Dept. of Organismic and Evolutionary Biology, Harvard University

4:15-4:30 635 Divergence in the face of gene flow: AFLP analysis of parapatric morphs of *Littorina saxatilis*
***Wilding, C.S. Butlin, R.K. and Grahame, J.**
bgycsw@leeds.ac.uk Center for Biodiversity and Conservation, The School of Biology, The University of Leeds, Leeds, LS2 9JT.

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#100 Speciation - plants **Session Moderator: E. J. Baack**
UT Conference Center Room 406

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3:30-3:45 636 Ecological divergence between *Helianthus paradoxus*, a diploid hybrid species and its progenitors
***Welch, M. & Rieseberg, L.**
marwelch@indiana.edu Indiana University

3:45-4:00 637 Adaptive diversification of rice A-genome through time and space
***Sang, T. & Li, C.-B.**
sang@msu.edu Department of Plant Biology, Michigan State University

4:00-4:15 638 Speciation in Neotropical gesneriads: insight from complete species-level phylogeny
***Savolainen, V., Perret, M., Chautems, A. & Spichiger, R.**
v.savolainen@rbgkew.org.uk Molecular Systematics Section, Jodrell Laboratory, Royal Botanic Gardens Kew, TW9 3DS London UK; Botanical Garden of Geneva, 1292 Geneva, Switzerland.

4:15-4:30 639 Pollination and Speciation of Californian *Antirrhinum*
***Oyama, RK, Jones, KN, Baum, DA**
royama@oeb.harvard.edu Dept. Organismic & Evolutionary Biology, Harvard University.

4:30-4:45 640 The Biological Reality of Species: Gene Flow, Selection and Collective Evolution
***Burke, J.M. & Rieseberg, L.H.**
jmburke@indiana.edu Indiana University, Dept. of Biology, Bloomington, IN 47405

4:45-5:00 641 Survival and growth of transplanted diploid and tetraploid snow buttercup seedlings (*Ranunculus adoneus*) in diploid and tetraploid sites
***Baack, E. J.**
ejbaack@ucdavis.edu Center for Population Biology, University of California, Davis

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5:30-6:30 SSE Presidential Address: Nick Barton "What is Evolution?"
KCEC Grand Ballroom

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6:30 – 9:00 Conference Banquet Exhibit Hall 1 ticket required

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POSTER SESSION –KCEC EXHIBIT HALL 2

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Biogeography/geographic variation

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1P Deriving explicit expectations of history: models of evolutionary processes using gene and species trees

***Knowles, L. L. and W. P. Maddison**
knowles@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721-0088

2P Comparative analysis of wing beat frequency and eye span in stalk-eyed flies (Diptera; Diopsidea

***Swallow, J. G., Fazio, J. M., & Wilkinson, G.** S.
jswallow@wam.umd.edu Department of Biology, University of Maryland, College Park, MD 20742

3P Geographic Variation and Species Boundaries in Pocillopora (Cnidaria; Scleractinia) using ITS1, ITS2 and 5.8s rDNA

§*Abreu. Olga
oabreu@bayou.uh.edu Department of Biology and Biochemistry, University of Houston

4P Regional genetic variation: implications for captive vervet monkeys

***J.P. Grobler and M.J. Matlala.**
paulg@unin.unorth.ac.za Department of Zoology and Biology University of the North P/Bag X1106 Sovenga 0727 SOUTH AFRICA

5P Historical explanations of phenotypic variation in the plethodontid salamander, Gyrinophilus porphyriticus

***Adams, D. C., and Beachy, C. K.**
dcadams@iastate.edu, beachych@warp6.cs.misu.nodak.edu Department of Zoology and Genetics and Department of Statistics, Iowa State University, Ames, IA 50011 (Adams), Department of Biology, Minot State University, Minot, ND 58707 (Beachy)

6P Explosive Color Morph Divergence in Poison Frogs from a Caribbean Archipelago

***Summers, K, Cronin, T, and Kennedy, T.**
Summersk@mail.ecu.edu Department of Biology, East Carolina University, Greenville, NC; Department of Biology, University of Maryland at Baltimore County, 1000 Hilltop Circle, Baltimore, MD; Department of Biology, McGill University, Montreal, Quebec, Canada

7P Evolutionary and ecological significance of the beech gaps in Great Smoky Mountains National Park

***Ashley Morris, Randy Small & Mitch Cruzan**
amorris@botany.ufl.edu Department of Botany, University of Florida; Department of Botany University of Tennessee; Department of Ecology and Evolutionary Biology, University of Tennessee

8P Using the Internally Transcribed Spacer region (ITS-1 and ITS-2) as marker to analyze intra-specific variation in marine ciliate populations

***Snoeyenbos-West, O.L. & Katz, L.A.**
osnoeyen@smith.edu Department of Biological Sciences, Smith College, Northampton, MA USA

9P Healing broken bones through simulations

***Gauthier, O., Landry, P.-A. & Lapointe, F.-J.**
gauthio@magellan.umontreal.ca Département de sciences biologiques, Université de Montréal, Montréal, Québec, Canada; Department of ecology and systematics, University of Helsinki, Helsinki, Finland; Département de sciences biologiques, Université de Montréal, Montréal, Québec, Canada

10P Population Structure in the Sonoran Desert Endemic *Drosophila pachea*
***Erez, T. & Markow, T.A.**
tamare@u.arizona.edu Department for Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ; Department for Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ

11P Phylogeographic patterns in multiple species of Malagasy chameleons
***Burns, M.M., Rakotomalala, D. & Yoder, A.D.**
m-moline@nwu.edu, ayoder@nwu.edu Northwestern University, University of Antananarivo, Field Museum of Natural History

12P Refugial Isolation vs. Ecological Gradients; Testing the alternatives in some African rainforest birds
***Smith, T.B., Holder, K., Pires, D. & Wayne, R. K.**
tsmith@sfsu.edu; kholder@sfsu.edu; dpires@ucla.edu; rwayne@ucla.edu Center for Tropical Research, SFSU; Center for Tropical Research, SFSU; UCLA; UCLA.

13P Local and regional allozyme and morphological variation among beetle populations
***Zumsteg, J., Deiner, K., Lundblad, J., Rank, N**
zumsteg@students.sonoma.edu,humbert@sonoma.edu,rank@sonoma.edu Department of Biology, Sonoma State University

14P Evolutionary divergence and historical biogeography in African rainforest birds
***Holder, K. & Smith, T.B.**
kholder@sfsu.edu Center for Tropical Research, San Francisco State University

15P Biogeography of Amphibians and Reptiles in Asia
***Macey, J. R.**
jrmacey@lbl.gov Joint Genome Institute, Department of Comparative Genomics, 2800 Mitchel Drive Bldg 100, Walnut Creek, CA 94538

16P Biogeography of Ants in Eastern Madagascar
***Girman, D., Fisher, B., Stephens, M., & Ouellette, G.**
girman@sonoma.edu Department of Biology, Sonoma State University, Department of Entomology, California Academy of Sciences, Department of Biology, Sonoma State University, Department of Biology, Sonoma State University

17P Genetic variation and the influence of epizootics in Sea Urchin (*Strongylocentrotus droebachiensis*) populations in the northwest Atlantic.
***Addison, J.A. & Hart, M.W.**
jaddison@is2.dal.ca, michael.hart@dal.ca Department of Biology, Dalhousie University, Halifax, NS, Canada

18P Phylogeography of *Clavicorona pyxidata* (Homobasidiomycetes)
***Lickey, E.B., Hughes, K.W., Petersen, R.H.**
elickey@utk.edu, khughes@utk.edu, repete@utk.edu Department of Botany, University of Tennessee, Knoxville, TN 37996

19P Introduction of wandering salamanders to Vancouver Island from California: evidence from mitochondrial and nuclear DNA sequences
***Hoptak, A. and Jackman, T.**
angela.hoptak@villanova.edu Villanova University

20P Genetic and phylogeographic relationships of the invasive round and tubenose gobies in the Great Lakes versus Eurasian populations
***Stepien, C. A. & Dillon, A.K.**
c.stepien@csuohio.edu Director, Great Lakes Environmental Genetics Laboratory and Research Professor, Center for Environmental Science, Technology, and Policy; Cleveland State University; Research Associate, Atherys, Inc.

21P Joint estimation of migration and colonization in a general model of population structure
***Stahl, E. A.**
elistahl@midway.uchicago.edu University of Chicago, Dept. of Ecology and Evolution

22P Morphological Changes Over Historical Time In Two Roan Mountain Endemic Plant Species
***Timothy McDowell, Dalenia S. Medford, Foster Levy**
mcdowelt@estu.edu Department of Biological Sciences, East Tennessee State University, Johnson City, TN 37614

Coevolution

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23P Group Selection and the Evolution of Competition
***Charles Goodnight**
charles.goodnight@uvm.edu Department of Biology, University of Vermont

24P Endosymbiosis and plant host evolution in Dryophthorinae (Coleoptera, Curculionidae)
§*O'Meara, Brian C., Farrell, Brian D.
omeara@post.harvard.edu and farrellb@oeb.harvard.edu Museum of Comparative Zoology, Harvard University

Combined data systematics

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25P Average consensus: the peacemaker
***Levasseur, C. & Lapointe, F.-J.**
levassec@magellan.umontreal.ca, lapoinf@ere.umontreal.ca Departement de sciences biologiques; Universite de Montreal; C.P. 6128, Succ. centre-ville; Montreal, Qc; H3C 3J7; Canada

26P A new test for assessing the congruence among distance matrices in phylogenetic analysis
Legendre, P., Levasseur, C. & *Lapointe, F.-J.
Pierre.Legendre@UMontreal.CA, Levassec@Magellan.UMontreal.CA, Lapoinf@ERE.UMontreal.CA Departement de sciences biologiques, Universite de Montreal, C.P. 6128, Succ. centre-ville, Montreal, Qc, H3C 3J7, Canada

27P Variability and Phylogenetic Incongruence of an 18S nrDNA Group I Intron in Clavicorona, Auriscalpium, and Lentinellus (Homobasidiomycetes)
***Lickey, E.B., Hughes, K.W., & Petersen, R.H.**
elickey@utk.edu, khughes@utk.edu, repete@utk.edu Department of Botany, University of Tennessee, Knoxville, TN 37996

28P Phylogeny of Agapophytinae subfamily nov. (Diptera: Therevidae) from Australia based on molecular and morphological evidence.
***Winterton S.L., Wiegmann, B.M. & Yang, L.**
Wintertonshaun@netscape.net North Carolina State University, Department of Entomology, Raleigh, NC, 27695

29P Evolutionary origin of allohexaploid Elymus repens (Poaceae): analysis of chloroplast and single-copy nuclear genes
***Mason-Gamer, R. J. & Orme, N. L.**
robie@uidaho.edu University of Idaho Department of Biological Sciences

Conservation biology

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30P Genetic consequences of natural habitat fragmentation on the endangered Amargosa vole, *Microtus californicus scirpensis*
***Neuwald, J.L.**
neuwald@rohan.sdsu.edu San Diego State University

31P Conservation genetics of the wood turtle (*Clemmys insculpta*), in Québec
***Tessier, N. & Lapointe, F.-J.**
nathalie.tessier@umontreal.ca lapoinf@ere.umontreal.ca Université de Montréal, Dept de Sciences biologiques, C.P. 6128, Succ. Centre-ville, Montréal (Qc), H3C 3J7, Canada

32P Genetic structure of amphibian populations in Northeastern Brazil: a comparison between natural and human-created forest fragments
***Carnaval, A.**
accarnav@midway.uchicago.edu University of Chicago/The Field Museum of Natural History

33P Adult phenology and transplanted seedling success among continuous, fragmented and secondary growth tropical forest in the palm *Oenocarpus bacaba*
***Lepsch-Cunha, N. & Hamilton, M. B.**
nn3@georgetown.edu Instituto Nacional de Pesquisas da Amazonia-Ecologia, Manaus AM Brazil and Biological Dynamics of Forest Fragments Project, Manaus AM Brazil ; Georgetown University, Department of Biology, Washington DC 20057 and Biological Dynamics of Forest Fragments Project, Manaus AM Brazil

34P Mutational Meltdown
***Davis, B. & Abrams, P.A.**
brad.davis@utoronto.ca, abrams@zoo.utoronto.ca University of Toronto, Department of Zoology

35 P Strong microhabitat differences in larval survivorship of an endangered saltmarsh butterfly
***Sei, M. & Porter, A.**
makiri@nsm.umass.edu, aporter@ent.umass.edu Organismic & Evolutionary Biology, Univ. Massachusetts-Amherst

Developmental evolutionary biology

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36P Methods for analyzing disparity in landmark data
***Sheets, H.D., M.L. Zelditch & D.L. Swiderski**
sheets@canisius.edu Dept. of Physics, Canisius College, Buffalo, NY 14208, Museum of Paleontology, University of Michigan, Ann Arbor, Michigan 49109, Museum of Paleontology, University of Michigan, Ann Arbor, Michigan 49109

37P Genetic architecture and development of tooth shape differences in Lake Malawi cichlids
***Streelman, J.T., Albertson, R.C., Webb, J. & T.D. Kocher**
jts3@hopper.unh.edu University of New Hampshire, University of New Hampshire, Villanova University, University of New Hampshire

38 P Developmental basis of floral trait variation in *Spergularia marina*
***Shepard, K. & Purugganan, M.**
kashepar@unity.ncsu.edu, michaelp@unity.ncsu.edu North Carolina State University, Department of Genetics, Raleigh NC

39P Plant gender evolution: the developmental evolutionary genetics of gender expression in primitive homosporous sporophytes.
***Jeffrey P. Hill**
hilljeff@isu.edu Department of Biological Sciences, Box 8007, Idaho State University, Pocatello, Idaho 83209 USA

40P New tools for the analysis of evolutionary change in patterns of gene expression underlying interspecific differences in morphology.
***Eric Dyreson and *Hope Hollocher**
edyreson@nd.edu Hope.Hollocher.1@nd.edu Notre Dame University

41P Juvenile hormone and exaggerated trait size in stalk-eyed flies (*Cyrtodiopsis dalmanni*)
***Fry, C.**
cfry@wam.umd.edu University of Maryland, College Park

42P Natural selection on the maternal patterning gene dorsal/rel in protostomes vs., deuterostomes
***Diehl, W.J.**
wjdiehl@ra.msstate.edu Mississippi State University

43P The Evolution and Development of Left-Right Asymmetry in Echinoderms
***Pizer, M. & Wray, G.A.**
mp15@duke.edu Duke University Biology Department

44P Juvenile hormone induces a heterochronic shift in cuticle formation and alters growth during embryonic development of Orthoptera
***Erezyilmaz, D.F., Riddiford, L.M., & Truman, J.W.**
denizere@u.washington.edu Department of Zoology, University of Washington

45P Hoxd 13 and the Evolution of Bat Wings
***Stern, Adam & Pumo, Dorothy**
astern4@hotmail.com; Dorothy.E.Pumo@hofstra.edu Dept. of Biology, Hofstra University, Hempstead, NY 11549-1149

Ecological genetics

****

46P Is there evidence for adaptation to host plants in the Giant Swallowtail butterfly (*Papilio cresphontes*)?
***Jameson, A.**
ajameson@bio.miami.edu University of Miami, Department of Biology

47P Conserving Evolutionary Potential in a Changing World: Among Population Divergence in Molecular Markers and Ecological Traits
***McKay, JK & Latta, RG**
jmckay@selway.umt.edu Dept. of Genetics and Evolution, Max-Planck-Planck Institute for Chemical Ecology, Jena, Deutschland; Dept. of Biology, Dalhousie University, Nova Scotia, Canada

48P Fitness trade-offs between types of resistance in *Arabidopsis*
***Heidel, A., Dong, X., Antonovics, J.**
ajh@duke.edu Duke, Duke, U. of Virginia

49P What is molecular ecology?
***Franks, S.J., Jones, F.A., Johnston, J.A., Bouck, A.C., Comita, L.S., Hardesty, B.D., Richards, C.L., Rosenthal, D.M., and West, J.B.**
franks@dogwood.botany.uga.edu The University of Georgia (all)

50P Ecological genetics of coat-color in mice: changes in allele frequency across a habitat gradient
***Hoekstra, H.E., Drumm, K.E., Kim, J.A. & Nachman, M.W.**
hopi@u.arizona.edu mawpaw15@yahoo.com juliak@u.arizona.edu nachman@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

51P Are MTDNA clade boundaries barriers to nuclear gene flow? Evidence from the western fence lizard
***Archie, J. & Vail, T.**
jarchie@csulb.edu travail@earthlink.net Department of Biological Sciences, California State University, Long Beach

Education

****

52P What do Teachers, Future Teachers, and University Students Think about Evolution?
Birker, I. & * Alters, B.
alters@education.mcgill.ca Redpath Museum, McGill University, Evolution Education Research Centre, McGill University

53P Using the Fossil Record to Mitigate Student Misconceptions of Evolution
Dodick, J. & *Alters, B.
guest3@education.mcgill.ca alters@education.mcgill.ca McGill University

54P Evonet.org: A website for education and research in evolutionary biology
***Phillips, P.C. & C. Gates**
pphil@darkwing.uoregon.edu University of Oregon

55P Applying evolution to relevant topics: A better way to teach pre-college students?
***Bright, K.L.**
kbright@selway.umt.edu Division of Biological Sciences, University of Montana

56P Introductory Biology Students' Conceptions of Evolution
***Kurdziel, J.P.**
kurdziel@u.arizona.edu University of Arizona, Department of Teaching and Teacher Education, Education Room 703, Tucson, AZ 85721

57P Student understanding of evolution in an introductory biology course
***Ingram, E.L., N.T. Welch, & C.E. Nelson**
eingram@indiana.edu, niwelch@indiana.edu, nelson1@indiana.edu Department of Biology, Indiana University (all)

58P Creationism & Evolution: A course for secondary school teachers
***Scheiner, S. M.**
sscheine@nsf.gov National Science Foundation

Evolution of behavior

****

59P Pre-mating isolation among demes of the fishing spider *Dolomedes triton*
***Kissane, K. C.**
kissane@scs.unr.edu University of Nevada, Reno.

60P Social learning and display effectiveness in juvenile male satin bowerbirds
***Coleman, S. W., deCarvalho, T. P., Patricelli, G. L., & Borgia, G.**
sc287@umail.umd.edu University of Maryland, Department of Biology (All Authors)

61P Anti-predator behaviors, condition dependence and predator acclimation in guppies, *Poecilia reticulata*
***Cheng, Y. & Rowe, L.**
yun@zoo.utoronto.ca, lrowe@zoo.utoronto.ca Department of Zoology University of Toronto

62P Diamondback moth larvae modify behavior on pesticide-treated plants
***Orr, D.J. & Winterer, J.**
DJ_Orr@fandm.edu, J_Winterer@fandm.edu Department of Biology, Franklin and Marshall College, Lancaster, PA 17604

63P Inferring the evolution of social behavior in halictine sweat bees: Multibariate and phylogenetic approaches
***Wyman, L.M. & Richards, M.H.**
lw96ab@badger.ac.brocku.ca Department of Biological Sciences, Brock University. St. Catharines, Ontario, L2S 3A1

64P Comparison of the agonistic behaviors of native and introduced wandering salamanders (*Aneides vagrans*) and clouded salamanders (*Aneides ferreus*)
***Wilson, K. and Jackman, T.**
kevin.a.wilson@villanova.edu Villanova University

65P Cultural transmission of predator recognition between allopatric populations of Trinidadian guppies
§*Michalak, T. & Rodd, H.
michalaktracy@yahoo.com Michalak, T. University of Toronto. Department of Zoology, Rodd, H., University of Toronto. Department of Zoology

66P Unrelated Foundress Associations in the Social Paper Wasp *Polistes dominulus*
***Emerson, J.J.%, Stagi M.+, Cervo, R.+, Queller, D.C.#, Turilazzi, S.+, Strassmann, J.E.#**
jje@midway.uchicago.edu %Department of Ecology and Evolution, University of Chicago & #Department of Ecology and Evolutionary Biology, Rice University & +Department of Biologia Animale e Genetica, University of Firenze, Italy

67P Sexual signaling and speciation in the Pneumoridae: the phylogenetic context
***van Staaden, M.J. & McIntyre, J.**
mvs@caspar.bgsu.edu Dept of Biological Sciences and JP Scott Center for Neuroscience, Mind & Behavior, Bowling Green State University

Evolution of host/parasite interactions

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68P Evaluation of a new strain of Wolbachia in natural population of lone star ticks (Amblyomma Americanum)
Gorham, C. H. & *Q. Q. Fang
qfang@gasou.edu Department of biology, Georgia Southern University, Statesboro, GA 30460-8042

69P Within host dynamics of microparasites and the evolution of parasite virulence: can we predict the direction of parasite evolution?
***Ganusov, V., Bergstrom, C., Antia, R.**
vganuso@emory.edu Emory University, Biology department, Population biology, ecology and evolution program

70P Isolation and identification of symbiont specific viruses from sepiolid squid light organs
***Stevenson, S.J. and Nishiguchi, M.K**
ststeven@nmsu.edu, nish@nmsu.edu Department of Biology, New Mexico State University

71P Interactions between sources of mortality and the evolution of parasite virulence.
***Williams, P. & Day, T.**
paulw@zoo.utoronto.ca, dayt@zoo.utoronto.ca Department of Zoology, University of Toronto

72P Male-killing Wolbachia in the mushroom-feeding fly *Drosophila innubula*
***Dyer, K. and Jaenike, J.**
kdyer@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

73P Comparative population genetics of a neutral locus and a disease resistance gene in *Lycopersicon pimpinellifolium*
***Caicedo, A.L.C. & Schaal, B.**
alcaiced@artsci.wustl.edu Department of Biology; Washington University, St. Louis, MO

Evolution of sex

****

74P The Red Queen Hypothesis for the Evolution of Sex: A Test of the Hypothesis using *Drosophila melanogaster* as a Biological Model.
***Eadie, C., Smalley, J., & Kight, S.**
eadiec@mail.montclair.edu; smalley@mail.montclair.edu; kight@pegasus.montclair.edu
Department of Biology & Molecular Biology, Montclair State University

75P Nest-Site philopatry and the evolution of temperature-dependant sex determination
***Valenzuela, Nicole & F. Janzen**
nvalenzu@iastate.edu Iowa State University

76P Recent and Ancient Parthenogenesis in Timema Walking-Sticks
***Law, Jennifer & Crespi, B.**
Bernard Department of Biology, Simon Frasier University

Evolutionary genetics of microorganisms

****

77P The Effects of Ploidy on the Rate of Adaptation in *S. cerevisiae*
***T. H. Vanderford and C. Zeyl**
vandth01@wfu.edu, zeylcw@wfu.edu Wake Forest University

78P Evolutionary insights into the origin of heavy-metal resistance genes
Hoostal, M. & *Bouzat, J.L.
jbouzat@bgnet.bgsu.edu, hoostal@bgnet.bgsu.edu Department of Biological Sciences, Bowling Green State University

79P Population Viability and the Cost of Deleterious Mutations
***Dinh, D. & Travisano, M.**
ddinh2@bayou.uh.edu University of Houston

80P Distribution of deleterious mutational effects in *Caenorhabditis elegans*
***Suzanne Estes & Michael Lynch**
sestes@darkwing.uoregon.edu, mlynch@oregon.uoregon.edu University of Oregon

Experimental Evolution

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81P Environmental effects on fitness and consequences for sex allocation in a reptile with environmental sex determination
***Freedberg, S., Ewert, M. A., & C. E. Nelson**
sfreedbe@indiana.edu Department of Biology, Indiana University

82P Selection on nuclear markers varies across environments in experimental populations of an intertidal copepod
***Willett, C. S., and R. S. Burton**
cwillett@ucsd.edu Marine Biology Research Division, Scripps Institution of Oceanography, UCSD, La Jolla, CA 92093-0202

83P Competition Experiments with Evolved Pathogenic *Escherichia coli*
***Walk, S. T. & Whittam, T. S.**
walkseth@msu.edu National Center for Food Safety and Toxicology

Genomics

****

84P The role of a detoxification enzyme in the evolution of a host plant association in the *Colias* genus of butterflies

***Wright, Paul M., Wheat, Christopher W., Watt, Ward B.**
pwright@stanford.edu Center for Evolutionary Studies, Biological Sciences, Stanford University, Stanford, CA 94305-5020 (same for all authors)

85P I2-like resistance genes from Solanaceae

***Spangler, R. & May, G.**
spangler@biosci.umn.edu Department of Ecology, Evolution, and Behavior, University of Minnesota

86P Patterns in the Evolution of Metabolic Pathways: Relationship between Pathway Length and Evolutionary Lability in Amino Acid Biosynthesis

***Zufall, R.A. and Rutter, M.T.**
raz1@duke.edu, mtr5@duke.edu Biology Dept., Duke University

87P Using secondary structure to identify ribosomal numts: cautionary examples from the human genome

Olson, L.E. & *Yoder, A.D.
lolson@northwestern.edu, ayoder@nwu.edu Field Museum of Natural History, Northwestern University

88P Evolutionary functional genomics: what broad questions has study of Colias PGI answered?

***Watt, Ward B.**
wbwatt@stanford.edu Dept. of Biological Sciences, Stanford University, Stanford, CA 94305-5020

89P Mitochondrial genomics of early metazoan phyla

***Medina, M. & Boore, J.**
mmedina@calacademy.org Joint Genome Institute

90P Genetic linkage and microsatellite polymorphism in the genome of the Japanese Pufferfish (*Fugu rubripes*)

***Neafsey, D.E.**
neafsey@oeb.harvard.edu Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA 02138, USA

91P Conserved vertebrate chromosome segments in the large salamander genome

Voss, S.R. *Smith, J.J. Gardiner, D.M. & Parichy, D.M.
srvoss@lamar.colostate.edu jjs@lamar.colostate.edu dmgardin@uci.edu dparichy@mail.utexas.edu Biology Department, Colorado State University; Biology Department, Colorado State University; Department of Developmental and Cell Biology and Developmental Biology Center, University of California, Irvine; Section of Integrative Biology and Institute for Cellular and Molecular Biology, University of Texas at Austin

92P Coming soon to a Tephritid near you: Sequence, Synteny, and Savoir-faire.

Roethele, J.B., *Dambroski, H.R., and Feder, J.L.
hattie.r.dambroski.1@nd.edu Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556

Hybridization

****

93P Evidence, Directionality and Genetic Effects of Interspecific Hybridization and Introgression in Fragmented Populations of *Pinus* Species

***Greenwell, R., Hudson, M., Dvorak, W. & Furman, B.J.**
bonnie.furman@wku.edu Western Kentucky University, North Carolina State University, Western Kentucky University

94P A New Host Race of Hybrid Origin? - Flies from the Apple Maggot Species Complex Colonize Non-Native Honeysuckle –

***Dietmar Schwarz and Bruce A. McPheron**
dxs332@psu.edu, bam10 The Pennsylvania State University; Department of Entomology, 501 ASI, University Park, PA 16802

95P Analysis of the genetic structure of a Manacus (Aves) hybrid zone using microsatellites

***Bhagabati, N.K., and Braun, M.J.**
nbhagaba@onyx.si.edu Laboratory of Molecular Systematics, National Museum of Natural History, Smithsonian Institution, MRC 534, Washington, DC 20560

96P Population structure and hybridization of introduced invasive plants: *Centaurea diffusa* and *C. maculosa* (Asteraceae)

***Hufbauer, R. A., Carney, S. E., Smith, L. & Sforza, R.**
hufbauer@lamar.colostate.edu Colorado State University, Ft. Collins, CO; Colorado State University, Ft. Collins, CO; USDA ARS Western Regional Research Center, Albany, CA; USDA ARS European Biological Control Laboratory, Montpellier, France

97P Hybrid populations of *Flammulina*

***Andrew Methven, Mark Mort, Karen Hughes, and Ron Petersen**
cfasm@eiu.edu Department of Biological Sciences Eastern Illinois University and Dept of Botany University of Tennessee

98P Female sexual preferences and signals localization in two subspecies of *Mus musculus*: a case study of two populations from the border of a hybrid zone

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99P Abpa polymorphism in wild populations of house mice and its variation across a hybrid zone

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100P Larval performance on host plants of sympatric, hybridizing *Colias* butterflies

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Life history evolution

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101P Changes in Bluegill, *Lepomis macrochirus*, Life History in Response to Thermal Extremes

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102P Maternal age negatively influences offspring aging in the fruit fly.
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103P Volumetric increase as a cost of reproduction in the livebearing fish, *Gambusia affinis*
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104P Identification of QTLs associated with longevity in *D. melanogaster*
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105P The biochemical basis of a life history trade off: Differences in lipid metabolism between dispersing/reproductive morphs of *Gryllus firmus*.
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106P Larval Fusion in the Purple Sponge, *Haliclona sp*.
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107P Sequence Analysis of Candidate Genes Involved in Aging in Lines of *Drosophila melanogaster*
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108P Searching for Countergradient Variation for Growth in the Redside Shiner, *Richardsonius balteatus*
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109P Chromosomal regions responding to divergent longevity selections in *Drosophila melanogaster*
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110 P Non-native plant invasion and co-evolved plant herbivore interactions.
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Mating/breeding systems

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111P Variation of functional gender of the annual plant *Raphanus raphanistrum* under environmental stress
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112P Population age effects on clone size and selfing rate in *Spartina alterniflora*
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113P Multigenerational effects of inbreeding on male and female function in *Cucurbita texana*
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114P Functional diversity in cytoplasmic male-sterility genes: evidence from crosses and molecular markers
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115P Mutational origin of mating type specificities
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116P The determinants of male frequency in androdioecious *C. elegans* populations
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117P Are females of the cactophilic *Drosophila pachea* sperm limited?
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118P Relatedness, mate choice, and offspring performance in gray tree frogs
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Mechanisms of reproductive isolation

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119P Evolution of asymmetric reproductive isolation
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120P The geographic pattern of hybrid male sterility between *Drosophila mojavensis* females and *D. arizonae* males
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121P Environment-dependent reproductive isolation in tiger salamanders
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122P Does heterozygosity for chromosomal rearrangements affect recombination patterns?
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123P Reproductive Isolation in *Myxococcus xanthus*
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Molecular evolution

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124P A Comparison of Microsatellites in Five *Drosophila* Species
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125P Implications of tissue specific expression of gender-associated mtDNA for rates of molecular evolution in mussels
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126P Molecular evolution and geographic variation of a mussel sperm protein
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127P Molecular evolution of viral fusion and matrix protein genes and phylogenetic relationships among the Paramyxoviridae
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128P Patterns of DNA Sequence Variation Suggest the Recent Action of Positive Selection in the janus-ocnus Region of *D. simulans*
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129P Hitchhiking and variable mutation rates in the major histocompatibility complex (Mhc) of Red-winged Blackbirds (*Agelaius phoeniceus*)
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130P Characterization of amino acid replacements in the T-cell receptor delta REC-PSI J Alpha associated with SIV resistance in *Cercocebus atys*
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131P Patterns of nucleotide substitution within and between mitochondrial gene regions in sea stars (*Leptasterias spp.*)
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132P Genomic Distributions of the Transposable Element Ty1 in Natural *Saccharomyces* Populations
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133P Selective sweep and demography drove the genetic structure of the hermaphroditic snail *Biomphalaria pfeifferi*
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134P Several divergent SW1 retrotransposable element subfamilies identified in the killifish genome
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135P Analysis of sequence variation in a DNA mismatch repair gene (mtMSH) apparently unique among metazoan mitochondrial genomes to the octocorals (Cnidaria, Anthozoa)
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136P Natural selection on mtDNA
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137P cpDNA Evolution in the Amazonian Trees of Lecythidaceae
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138P The distribution of nonsynonymous/synonymous rate ratios among lineages of MHC genealogies
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139P Is there a special role for specialists in the evolution of the odorant-receptor gene family?
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140P Novel mtDNA gene order in serranids
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141P Elucidating Squamate Relationships with 28S rDNA
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142P Self/Nonself recognition systems: many loci, many alleles
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143P Poster Cancelled

Molecular systematics

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144P Test of the phylogenetic utility of Acetylcholinesterase (AChE) in ticks
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145P Multiple gene genealogies and relationships among phyllopharyngean ciliates
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146P Molecular systematics of the genus *Hoya* (Asclepiadaceae)
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147P Molecular Phylogeny of Ants (Tribe Amblyoponini)
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148P Preliminary insights into the phylogenetics of Zaluzianskya (Scrophulariaceae, Tribe Manuleae) inferred from DNA sequence data.
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149P Molecular Phylogeny and Biogeography of Curassows (Cracidae, Aves)
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150P Phylogenetic Analysis of the Chloroplast psbA Gene Sequence to Infer Pteridophyte Relationships
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151P Molecular Phylogeny of the Mysticeti (Cetacea: Mammalia)
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152P Molecular Phylogeny of Chipmunks (*Tamias spp.*) inferred from the D-loop region
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153P Phylogenetic position of Australian fairy shrimp genera (Branchiopoda: Anostraca) based on DNA sequence data
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154P Phylogenetic relationships in Lymnaeidae (Mollusca: Gastropoda) inferred from multiple molecular data sets
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155P Molecular clocks and rocks: the importance of fossils in inferring evolutionary divergence dates
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156P Dating the origin of New World voles with multiple rates and calibration dates
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157P Evolutionary relationships of a "species pair" in the lichen-forming genus *Porpidia* (Ascomycota)
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158P Phylogenetic relationships and evolution of Crassulaceae inferred from matK sequence data
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159P Microsatellite and DNA sequence analysis for determining phylogenetic relationships among populations of warbler finches (a Darwin's finch) using museum specimens
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160P Phylogenetic Relationships of the Dwarf Boas
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Phenotypic plasticity and G*E

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161P Plasticity of resource allocation in response to food availability in the livebearing fish *Phalloceros caudimaculatus*
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162P Environmental correlates of geographical shape variation in skull and mandible shape of *Thrichomys apereoides* (Rodentia: Echimyidae).
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163P Variation in environmental heterogeneity among populations of *Geranium carolinianum*: a phytometer study
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164P Does differential predictability of environment lead to plasticity of maternal provisioning?
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165P Cold-induced plasticity in artificially selected shade-plastic lines of *Arabidopsis thaliana*
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Phylogeny based comparative methods

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166P Error Correction for Phylogenetic Trees of Quartets
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167P The phylogenetic F-test for rates of trait diversification in sister taxa: an example using seed size in the California flora

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168P Effects of number of taxa and sequence length on phylogenetic tree-based calculations of substitution rates in insect genes

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169P Hypercarnivory: an evolutionary dead end? The effects of specialization on subsequent character change

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170P The development of an ontology for describing behavior and its application to comparative studies

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171P Tracing the evolution of form: mapping continuous characters onto phylogenetic trees using geometric constraints

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Phylogeography

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172P Clonal diversity in *Daphnia tenebrosa* as assessed by microsatellite markers

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173P Comparative phylogeography of two ecologically diverse anuran species, *Pseudacris crucifer* and *Rana catesbeiana*

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174P Genetic divergences of northern hemisphere polychaete Nereis virens based on mtDNA sequences analysis

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175P Genetic diversity and phylogeography in *Desmognathus monticola* (Plethodontidae) inferred from analyses of Intersimple Sequence Repeats

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176P Relationships Among Neotropical Areas of Endemism: Phylogeography of the Wedge-billed Woodcreeper (Aves: Dendrocolaptidae).

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177P Phylogeography of *Semibalanus balanoides* in the North Atlantic
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178P Phylogeography of *Pseudobranchus striatus* in the southeastern United States
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179P Taxonomic and Evolutionary Significant Unit Status of Western Yellow-Billed Cuckoos (*Coccyzus americanus*)
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Plant reproductive ecology

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180P Breakdown of self-incompatibility in *Witheringia solanacea*, a tropical shrub
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181P Maintenance of sex under disturbance regimes. A patch dynamics model.
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182P Evolutionary ecology of *Collinsia sparsiflora* growing on serpentine and non-serpentine soils
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Population genetics

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183P Genetic differentiation of a Brachiopod in the New Zealand fiords: a dispersal barrier in the marine environment?
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184P A logistic branching process alternative to the Wright-Fisher model
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185P Mutational meltdown: an enhanced process in small populations with the existence of premeiotic clusters of mutation
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186P Population genetics of *Howellia aquatilis* (Campanulaceae) in disjunct locations throughout the Pacific Northwest
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187P Population genetic structure of walleye and sauger in the Ohio River.
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188P Validation of RAPDs with microsatellites: an empirical study
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189P Population structure of spotted sunfish (*Lepomis punctatus*) in the Florida Everglades as revealed by DNA microsatellite analysis
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190P Linkage Disequilibrium in *Mixe amerindians*
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191P Genetic and isotopic approaches for assessing population connectivity in a migratory warbler
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192P Estimating selfing and gene flow components in isolated plant populations with the use of hypervariable markers.
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193P Does selection maximize functional diversity of MHC genes in human populations?
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194P Fine scale population structure in a Limnoporus water strider hybrid zone
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195P Nuclear Sequence Variation in Lake Malawi Cichlids
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196P Selection on a color polymorphism in the northern leopard frog, *Rana pipiens*
***Eric A. Hoffman**
hoffmane@bcc.orst.edu Oregon State University

197P Two Generation Analysis of Pollen Flow Across A Landscape IV: The Effects of Autocorrelated Patterns in Adult Genetic Structure on Pollen Pool Diversity
***Dyer, R.J.**
rodney@jinx.umsl.edu Department of Biology, University of Missouri - St. Louis, Saint Louis, Missouri 63121

198P Evidence for ancient populations of pumpkin fruit fly in Korea and Japan: nuclear intron and mitochondrial DNA sequences
***Mun, J.H., Song, Y.H. & Roderick, G.**
jhmun@nature.berkeley.edu University of California, Berkeley, Gyeong Sang National University, Korea, & University of California, Berkeley

199P Population genetic analysis of the spectrum of mutations in tumor suppressor genes
Rannala, B. & *Ro, W-S.
brannala@ualberta.ca simon.ro@ualberta.ca Department of Medical Genetics, University of Alberta

200P Transient polymorphism under viability selection and facultative apomixis
***Overath, R. D. & Asmussen, M. A.**
overath@spice.cc.utexas.edu, asmussen@arches.uga.edu Section of Integrative Biology, University of Texas, Austin, TX 78666; Department of Genetics, University of Georgia, Athens, GA 30602

201P Population differentiation in the giant kangaroo rat, *Dipodomys ingens*
***DeAngelo, M.R. & Spicer, G.**
bikegirl@sfsu.edu, gs@sfsu.edu San Francisco State University

Quantitative genetics

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202P Genetic constraints on evolution in heterogeneous environments
***Byers, D. L.**
dlbyer2@ilstu.edu Dept. of Biological Sciences, Illinois State University

203P Demographic senescence and lifespan heritability in a captive baboon colony
***Bronikowski, A., Tatar, M., Comuzzie, A., Martin, L. Packer, C., & Carey, K. D.**
abronikowski@facstaff.wisc.edu Dept. of Zoology, U. Wisconsin, Madison WI; Dept. of Ecology and Evolutionary Biology, Brown U., Providence RI; Dept. of Genetics, Southwest Foundation for Biomedical Research, San Antonio TX; Dept. of Genetics, Southwest Foundation for Biomedical Research, San Antonio TX; Dept. of Ecology, Evolution, and Behavior, U. Minnesota, St Paul MN; Dept. of Physiology and Medicine, Southwest Foundation for Biomedical Research, San Antonio TX

204P Using Genetic Markers to Directly Estimate Male Selection Gradients
***Morgan, Martin T. & Conner, Jeffery K.**
mmorgan@wsu.edu; Conner@kbs.msu.edu 1. School of Biological Sciences, Washington State University, Pullman, Washington, 99164-4236; 2. Kellogg Biological Station, Department of Botany and Plant Pathology, Michigan State University, 3700 East Gull Lake Drive, Hickory Corners, Michigan, 49060

Sexual selection

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205P Reverse sexual dimorphism in Accipiter hawks: Data on shape as clues to patterns of selection
***Ruedi, E. & Houde, A.**
houde@lfc.edu Department of Biology, Lake Forest College, Lake Forest, Illinois

206P The complex history of a gene proposed to control a sexual isolation mechanism in house mice
***Robert C. Karn1, Annie Orth2, François Bonhomme2 and Pierre Boursot2**
rkarn@butler.edu; a-orth@univ-montp2.fr; bonhomme@crit.univ-montp2.fr; boursot@crit.univ-montp2.fr 1Department of Biological Sciences, Butler University, Indianapolis, IN 46208, U.S.A.; 2Laboratoire Génome Populations Interactions, CNRS UMR5000,Université Montpellier II , F34095 MONTPELLIER Cedex 5, FRANCE

207P Rapid Evolution of Sex and Reproduction Related Genes in Ground Crickets
***Braswell, W.E. & Howard, D.J.**
wbraswel@nmsu.edu Department of Biology, New Mexico State University, Las Cruces, NM 88003

208P Sexual Selection and Adaptive Coloration in the Collared Lizard, *Crotaphytus collaris*: A Preliminary Assessment

***Macedonia, J.M.**
jmacedon@utk.edu Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN 37996

209P The effects of socially driven dispersal on local sex ratio, male-female interactions, and sexual selection

Ziemba, R. E. & Sih, A.
reziem2@pop.uky.edu School of Biological Sciences, University of Kentucky

Speciation

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210P Host shifts and speciation in Blepharoneura (Tephritidae): molecular, morphological, and behavioral evidence

***Condon, M., Pumo, D., Romashko, J., *Smith, J., Strovas, T., Sturges, J., Thunberg,**
C. mcondon@cornell-iowa.edu, Dorothy.E.Pumo@Hofstra.edu, JRomashko@aol.com, jimsmith@pilot.msu.edu, tstrovas@u.washington.edu, j-sturges@cornell-iowa.edu, cthunberg@treesforever.org Cornell College, Hofstra University, Hofstra University, Michigan State University, Cornell College, Cornell College, Cornell College

211P Cladistic analysis of gene sequence data for a suite of Florida wolf spiders indicates cryptic species and the repeated evolution of an ecomorph

***Hoeh, W., Thornburg, K., Wu, T., & Marshall, S.**
whoeh@kent.edu, marshallsd@hiram.edu Department of Biological Sciences, Kent State University; Department of Biological Sciences, Kent State University; Department of Biological Sciences, Kent State University; Department of Biological Sciences, Kent State University; J. H. Barrow Field Station, Hiram College

212P A multi-locus view of speciation in *Arabidopsis* species

***Stranger, B. & Mitchell-Olds, T.**
bstrange@ice.mpg.de Max Planck Institute of Chemical Ecology/University of Montana; Max Planck Institute of Chemical Ecology

213P Recent Radiation of Caribbean *Drosophila*: Insights from Introns

***Wilder, Jason A., Hollocher, Hope**
jawilder@princeton.edu Department of Ecology and Evolutionary Biology, Princeton University; Department of Biological Sciences, University of Notre Dame

214P Incipient speciation in the butterfly genus *Lycaeides*

***Gelembiuk, G.W., Nice, C., Anthony, N., Raterman, D., and ffrench-Constant, R.**
gelembiu@entomology.wisc.edu, ccnice@facstaff.wisc.edu, anthonynm2000@yahoo.co.uk, deniseg@pop.ucr.edu, bssrfc@bath.ac.uk Department of Botany, University of Wisconsin, Madison, Wisconsin 53706, USA; Department of Entomology, University of Wisconsin, Madison, Wisconsin 53706, USA; Biodiversity and Ecological Processes group, Department of Biosciences, Cardiff University, Wales CF10 3TL, UK; Department of Biology, University of California, Riverside, California 92521, USA; Department of Biology and Biochemistry, University of Bath, Bath BA2 7AY, UK

215P Population genetics of a recent adaptive radiation of Alaskan threespine stickleback

***Cresko, William A., & Foster, Susan A.**
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Species interactions

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216P Hidden diversity: fungal endophytes in neotropical trees

***Arnold, A.E**
betsya@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

217P Predator-mediated frequency-dependent selection on polymorphic prey
***Punzalan, D. and Rodd, F.H.**
punzalan@zoo.utoronto.ca University of Toronto, Department of Zoology, Ontario, Canada

218P Poster Cancelled

219P Hybrid Vigor for Tolerance to Damage
***Hochwender, C.G., Lucas, C., Feldman, J., Fritz, R.S.**
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220P Survivorship of an ant-tended butterfly and the role of resource availability in mediating a butterfly-ant mutualism.
***Weeks, J. A.**
weeks@u.arizona.edu Department of Ecology and Evolutionary Biology, University of Arizona

221P Application of R* theory may predict relative species abundances in old-fields in the northeastern United States
***(1)(2)Banta, J. A., (1)(2)S. Stark, (1)(2)(3)M. H. Stevens, and (1)(2)W. P. Carson**
Joshua_Banta@Brown.edu (1)University of Pittsburgh, Pittsburgh PA 15260 (2)University of Pittsburgh Pymatuning Laboratory of Ecology, Linesville PA 16424 (3)Rutgers University, New Brunswick NJ 08901

222P The effects of early and late-season herbivore damage on plant fitness
***Stinchcombe, J.R**
jrs15@duke.edu Duke University Biology Department

223P Host-associated genetic differentiation in the goldenrod elliptical-gall moth, *Gnorimoschema gallaesolidaginis* (Lepidoptera: Gelechiidae)
***Nason, John.; Stephen B. Heard & Frederick R. Williams**
jnason@iastate.edu Dept. of Biological Sciences, University of Iowa; Dept. of Biological Sciences, University of Iowa; Dept. of Botany, Iowa State University

Systematics

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224P Phylogenetic Relationships of North American Chorus Frogs (*Pseudacris*)
***Moriarty, E. & Cannatella, D.**
chorusfrog@mail.utexas.edu, catfish@mail.utexas.edu Section of Integrative Biology and Texas Memorial Museum, University of Texas, Austin, TX 78712, USA

225P Evolution of Obligatory Trophobiosis in the ant genus *Acropyga*
***LaPolla, J.S. & Kjer, K.M.**
lapolla@eden.rutgers.edu, kjer@rci.rutgers.edu Department of Entomology, Rutgers University

226P Use of RAPD markers to establish relationships among species of *Helianthus* series Divaracati
***Desrochers, A.M.**
adesroch@butler.edu Butler University, Department of Biology

227P Systematics and breeding system evolution in *Leavenworthia*
***Beck, J.B. & Al-Shehbaz, I. & Schaal, B.A.**
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228P Sexually antagonistic coevolution of a postmating-prezygotic reproductive character in desert *Drosophila*

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230P Type I error rates in Monte Carlo randomization tests for populations structure from microsatellite data.

Cork, J., McElroy, D.
Biotechnology Center and Cetner for Biodiversity Studies, Western Kentucky University, Bowling Green, KY 42101. doug.mcelroy@wku.edu

231P Microsatellite DNA analysis of population structure in Kentucky whitetail deer (*Odocoileus virginianus*)

***Doerner, Kinchel; Braden, Wes; Cork, Jennifer; Cunningham, Tom; Rice, Amanda; Fowler, Rick; Furman, Bonnie J.; McElroy, Doug.**
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232P Codon usage in cytochrome oxidase I for multiple orders of Insecta.

***Novembre, John & Herbeck, Josh**
Department of Integrative Biology (Novembre), and Division of Insect Biology (Herbeck), University of California, Berkeley. novembre@Socrates.Berkeley.edu

233P Reproductive skew between confounding honey bee parasitic mites.

Evans, J.D. & Pettis, J.S.
Bee Research Lab, USDA-ARS, Beltsville, MD, 205705. evansj@ba.ars.usda.gov

234P Spontaneous mutational variation in wheat (*Triticum durum*): a mutation accumulation experiment.

Batallion, T. & S. Poirier, A.C. Thuillet, and J. David.
INRA (France) and Section of Integrative Biology, C0930, University of Texas, Austin, TX 78712. bataillon@ensam.inra.fr

235P Gene genealogies in a metapopulation.

Wakeley, John.
Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA 02138. wakeley@fas.Harvard.edu

236P Phylogeography and population genetic structure of the Pink Hibiscus mealybug (*Maconellicoccus hirsutus*).

Martin, J.F.
CSIRO – European Laboratory – Division of Entomology, Campus Internationale de Baillarguet, 34980, Montferrier/Lex, France. Jef.Martin@csiro-europe.org.

237P Phylogenetic software from Glasgow.

Page, R.D.M.
Division of Environmental and Evolutionary Biology, University of Glasgow. R.page@bio.gla.ac.uk.

238P Pervasive recombination in HIV

Worobey, Michael, & Andrew Rambaut, David L. Robertson*.
University of Oxford, Zoology Department. David.Robertson@zoo.ox.ac.uk

239P Phylogeny and the origin of HIV-1.
Rambaut, Andrew* & David L. Robertson, Oliver G. Pybus, Martine Peeters, and Edward C. Holmes.
University of Oxford, Zoology Department. Andrew.Rambaut@zoo.ox.ac.uk

240P Post glacial expansion and the evolution of migration routes in Swainson's.
Ruegg, K. & Smith, T.
San Francisco State University. kruegg@sfsu.edu, tsmith@sfsu.edu

241P Isolation and the use of microsatellites for the analysis of *Sceloporus grammicus* complex (Sqamata: Phrynosomatidae) within a hybrid zone in Central Mexico.
***Arevalo, Elizabeth & Patrick Degnan.**
Providence College. earevalo@postoffice.providence.edu

242P Rampant transfers of mitichondrial genes to the nucleus during Angiosperm evolution
***Adams, Keith & Yin-Long Qiu, Dan Daley, Jim Whelan, Jeff Palmer**
Department of Biology, Indiana University, Bloomington, IN 47405; Biochemistry Department, University of Western Australia, Nedlands, 6907 Australia. Kadams@bio.Indiana.edu

243P Phylogenetic relationships of Owlet-nightjars from museum skin DNA
Dumbacher, John P.[1], & Thank K. Pratt[2], Robert Fleischer[1].
1) Molecular Genetics Laboratory, National Zoological Park, Smithsonian, 2) Pacific Island Ecosystem Research Center, Biological Resources Division, US Geological Survey, dumbacherj@nzp.si.edu, thane_pratt@usgs.gov, fleisherr@nzp.si.edu

244P How scientific is Canada's proposed endangered species legislation?
Manne, L.L.[1], & D. Srivastava[1], S. Elgie[2], G.G.E. Scudder[1], A.O. Mooers[3]*
1) Center for Biodiversity Research and Department of Zoology, University of British Columbia, Vancouver, Canada. 2) Sierra Legal Defense Fund, Toronto, Canada. 3) Biological Sciences, Simon Fraser University, Burnaby, Canada V5A 1S6.

245P Evaluating components of fitness for color morphs of a sailfin silverside fish from Lake Matano, Sulawesi.
McKinnon, Jeffrey S.[1]*, & Jeremy Mitchell[2], Bambang Soeroto[3], Fadly Tantu[3], Erin Sassman[1], and Larry Dill[2].
1) Biological Sciences, University of Wisconsin Whitewater, Whitewater, WI 53190 mckinnoj@mail.uww.edu 2) BERG, Department of Biological Sciences, Simon Fraser University, Canada. 3) Faculty of Fisheries and Marine Science. Sam Ratulangi University, Indonesia.

246P Spatial genetic structure of mountain hemlock (*Tsuga mertensiana*)
Ally, Dilaria* & Kermit Ritland
dilaria@interchange.ubc.ca, University of British Columbia

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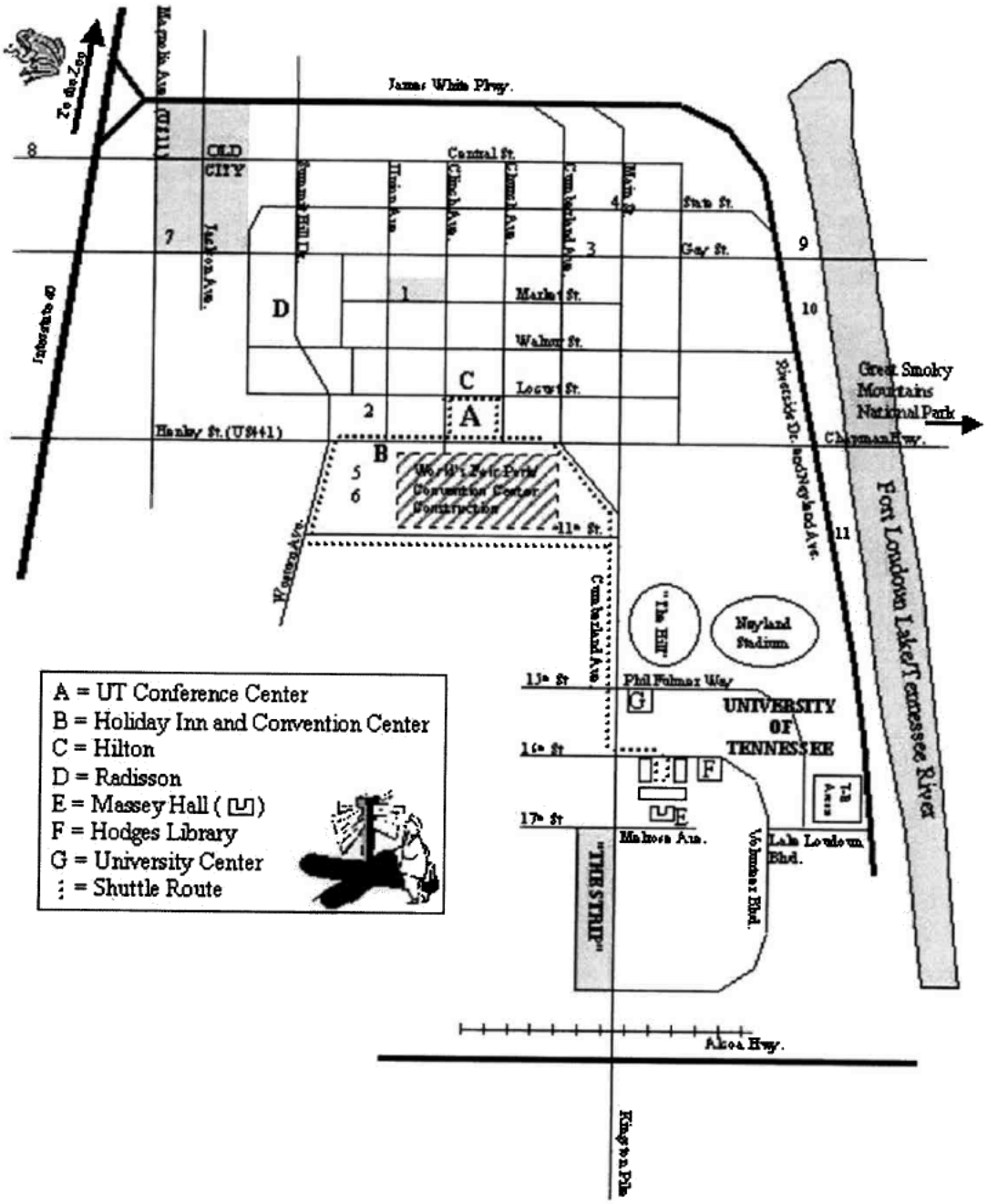

Map not drawn to scale.

Shuttle route may vary. Actual shuttle route will be available at registration and will be a continuous loop between Massey Hall and the Knoxville Convention/Exhibition Center.

Cumberland Avenue is also known as "The Strip," where many fast food establishments and sit-down restaurants are located.

See next page for a list of restaurants downtown that are noted above by number.

RESTAURANTS AND ENTERTAINMENT

DOWNTOWN AREA:

See map on previous page to match the number of restaurant below with a general location.

A. *Windows Over The Park*: Holiday Inn -World's Fair Park, 525 Henley St.; 522-2800.
1. *The Tomato Head*: Gourmet pizzas, bread, sandwiches, salads; 12 Market Square; 637-4067.
2. *Chesapeake's*: Fresh seafood and Eastern shore; 500 Henley St.; 673-3433.
3. *Bistro at the Bijou*: 807 Gay St.; 544-0537.
4. *The Lunchbox*: 800 Gay St.; 525-7421.
5. *The L & N Café*: 401 Henley St.; 523 3429.
6. *Butcher Shop Steakhouse*: 806 World's Fair Park Dr.; 637-0204.
7. *Regas*: Gay St. and Magnolia Ave.
8. *Melting Pot*: Dinner only; a fondue restaurant; 111 North Central Ave.; 525-5858.
9. *Riverside Tavern by Regas:* Steaks, chicken; 950 Volunteer Landing Lane; 637-0303.
10. *Calhoun's on the River*: Ribs, etc.; 400 Neyland Dr.; 673-3355.
11. *Tennessee Grill*: 900 Neyland Dr., above the boathouse; 862-8657.

ON THE STRIP:

In addition to the assorted fast food joints (McDonald's, Wendy's, Krystal, Blimpie, etc.)

SIT DOWN PLACES:

Charlie Pepper's: TexMex; 716 20th St. off Cumberland Ave.; 524-8669.
Copper Cellar: Prime Rib, lobster, seafood; 1807 Cumberland Ave.; 673-3411.
Kashmir Indian Restaurant: Indian Cuisine; 711 S.17th St.; 524-1982.
O'Charley's Sports Grille: Steaks, chicken, sandwiches, salads; 1915 Cumberland Ave.; 525-7665.
Old College Inn: American food and drinks; 2204 Cumberland Ave.; 523-4597.
Ruby Tuesday: Sandwiches, burgers, chicken, salads; 1701 Cumberland Ave.; 544-7747.
Sunspot: Caribbean fare; 1909 Cumberland Ave.; 637-4663.

OTHER GOOD BETS ON "THE STRIP" *(quicker, but not really fast food):*

D.P.Dough: Calzones only; 1903 Cumberland Ave.; open for dinner only.
Dynasty Express: Chinese; 1647 Cumberland Ave.
Falafel Hut: Middle Eastern Fare; off Cumberland Ave. at 15th St. and Laurel Ave.
Goodtimes Deli: off Cumberland Ave. on Melrose Ave.
Jersey Mike's: Subs; 1703 Cumberland Ave.
McAlister's Gourmet Deli: 1801 Cumberland Ave.
Panera Bread Co.: 2000 Cumberland Ave.
Sam and Andy's Deli: 1800 Cumberland Ave.
Sarge's BBQ: off Cumberland Ave. at 811 22nd St.
Sawyer's: Fried chicken; off Cumberland Ave. at 701 17th St.
Schlotzsky's Deli: 2021 Cumberland Ave.
Smoothie King: 1702 Cumberland Ave.
Trio's: Wood-fired pizza, calzones, and salads; off Cumberland Ave. on Melrose Ave.
Vic and Bill's Deli: off Cumberland Ave. on 15th St.

THE OLD CITY:

Barley's Taproom & Pizzeria: Gourmet Pizzas & Entertainment; 200 Jackson Avenue.
Lucille's: Live outside jazz and blues; 106 Central Avenue; 546-3742.
Tjaarda's: Seafood and fine vegetarian fare; 118 Central Avenue; 637-8702.
Manhattan's Bistro and Bar: 101 Central; 525-2333.
Old City Grill: 109 Central Street; 522-4699.
Patrick Sullivan's Saloon: 100 Central; 637-4255.

DRIVING REQUIRED (but good food!)

Mexican

Cozymel's Mexican Grill: 7727 Kingston Pike; 694-9811.
Don Pablo's: 8088 Kingston Pike; 531-5600.

Italian

Italian Market and Grill: 9648 Kingston Pike, Franklin Square; 690-2600.
Naples Italian Restaurant: 5500 Kingston Pike; 584-5033.
Romano's Macaroni Grill: 7723 Kingston Pike; 691-0809.

Asian

Mandarin House: Voted best buffet in Knoxville; 314 Merchants Drive; 689-4800.
8111 Gleason Dr. Downtown West; 694-0350.
Miyabi Kyoto: 8207 Kingston Pike; 691-3121.
Stir-Fry Café: 7420 Kingston Pike; 588-2064.
Szechuan Garden: 4211 Chapman Hwy; 579-0889.

American

Baker Peters Jazz Club: Great steaks, cigars, and martinis; 9000 Kingston Pike; 690-8110; Reservations recommended.
Copelands of New Orleans: Cajun Creole; 6400 Kingston Pike; 584-5255.
Darryl's Restaurant: Sandwiches, ribs, salads; 6604 Kingston Pike; 584-1879.
The Chop House: 9700 Kingston Pike, Franklin Square Center.
Ye Olde Steakhouse: 6838 Chapman Hwy; 577-9328.

NIGHTLIFE IN THE OLD CITY AND CUMBERLAND AVENUE

OLD CITY

Patrick Sullivan's Saloon: 100 N. Central; 637-4255
Entertainment and Bar in the Old City.

Lucille's: 106 South Central Avenue; 546-3742
T-Su 5pm-late; Live outside jazz and blues

Old City Grill: 109 Central Street; 522-4699
Entertainment and Bar in the heart of the Old City.

Manhattan's Bistro and Bar: 101 S. Central; 525-2333
Live Entertainment, Open Late. Located in the Old City.

Barley's Taproom & Pizzeria: 200 East Jackson Avenue; 521-0092
M-Sa 11:30am-1am; Su 12pm-1am; Great Gourmet Pizzas, Good Beer & Entertainment

CUMBERLAND AVENUE (CAMPUS)

O'Charley's Sports Grille: 1915 West Cumberland Avenue; 525-7665
M-Sa 11am-3am; Su 11am-10pm; Entertainment; steaks, chicken, sandwiches, and salads.
Charlie Pepper's: 716 Cumberland Avenue @ 20th Street; 524-8669
M-Su 11am-12am; Dancing and Bar.

AREA ATTRACTIONS

HISTORIC HOMES

Blount Mansion 865/525-2375
200 West Hills Avenue, Knoxville, TN 37901
The circa 1792 home of Territorial Governor William Blount, the first and only governor of the Territory Southwest of the Ohio River, is a National Historic Landmark.

James White Fort 865/525-6514
205 E. Hill Avenue, Knoxville, TN 37915
Located on a bluff above the Tennessee River near downtown Knoxville, the fort was built in 1786 by General James White, Knoxville's founder.

Ramsey House 865/546-0745
2614 Thorngrove Pike, Knoxville, TN 37914
Built in 1797, Ramsey House is the first stone house in Knox County and is listed on the National Historic Register.

Governor John Sevier Home (Marble Springs) 865/573-5508
1220 West Governor John Sevier Highway, Knoxville, TN 37920
John Sevier, Tennessee's first governor, built his house when he came to the state capital in 1796.

Mabry-Hazen Home 865/522-8661
1711 Dandridge Avenue, Knoxville, TN 37915
This antebellum home served as headquarters for both Union & Confederate Forces during the Civil War.

SHOPS/GALLERIES/MUSEUMS

Beck Cultural Exchange Center 865/524-8461
1927 Dandridge Avenue, Knoxville, TN 37915
Museum for the research, preservation, and display of the achievements of African Americans in Knoxville.

Candy Factory 865/522-2049
1060 World's Fair Park Drive, Knoxville, TN 37916
The building was built circa 1917. See the chocolatiers at work and stroll through the many unusual shops and galleries.

The Frank H. McClung Museum 865/974-2144
1327 Circle Park, Knoxville, TN 37996-3200 (campus)
McClung is a general museum with collections in anthropology, ancient Egypt, archeology, decorative arts, medicine, local and natural history.

Victorian Houses 865/525-7619
11th Street & Laurel Avenue, Knoxville, TN 37916
These quaint, brightly hued houses, listed on the National Historic Register, were built in the 1920's and are now home to antique and curiosity shops as well as studios and galleries.

Knoxville Museum of Art 865/525-6101
1050 World's Fair Park Drive, Knoxville, TN 37916-1653
Located downtown in the World's Fair Park, the Knoxville Museum of Art features permanent collections, traveling exhibitions, tours, and concert performances.

Volunteer Landing, Downtown Waterfront
500 Neyland Drive, Knoxville, TN 37916
One mile of paved riverwalk, fishing piers, boat docks, picnic facilities, roofed tower with observation deck, and interpretive historical markers. The complete history of Tennessee waterways.

MISCELLANEOUS

Old City District
Located at the intersection of Jackson Avenue and Central Street in downtown Knoxville, this historic downtown warehouse district welcomes you to dining, shopping and entertainment.

Tennessee RiverBoat Company 865/525-7827
300 Neyland Drive, Knoxville, TN 37902
This genuine 325 passenger sternwheel riverboat offers sightseeing, lunch, dinner, entertainment, and moonlight cruises.

Ijams Nature Center 865/577-4717
2915 Island Home Avenue, Knoxville, TN 37920
Ijams Nature Center is an eight acre city park and community nature center. Walk along foot trails that wind across streams, meadows, fern banks and bluffs overlooking the Tennessee River.

East Tennessee Discovery Center 865/594-1480
516 N. Beaman Street, Knoxville, TN 37914
Exciting science center for children of all ages.

East Tennessee Historical Society 865/544-5732
600 Market St, Knoxville, TN 37914
ETHS fulfills its mission of preserving and promoting East Tennessee history through a variety of programs including exhibits, tours, genealogy conferences, community history projects, publications and lectures.

Women's Basketball Hall of Fame 865/633-9000
700 Hall of Fame Drive, Knoxville, TN 37915
Honor the Past, Celebrate the Present, Promote the Future of Women's Basketball in this wonderful museum. Learn about the history of the progression of Women's Basketball through an exciting movie, interactive displays, and an athletic playground that is out of this world.

Knoxville Zoo 865/637-5331
Chilhowee Park PO Box 6040, Knoxville, TN 37914
With more than 1,000 exotic animals including gorillas, red pandas, and rhinos, the Knoxville Zoo is full of family fun, adventure, and learning.

West Town Mall 865/693-0292
I-40 Exit 380. Located in the center of west Knoxville. West Town Mall has a variety of department and specialty stores.

Knoxville Center (Mall) 865/544-1500
I-640 Exit 8. Newly remodeled mall featuring a life size map of the University of Tennessee.

Great Smoky Mountains National Park
Approximately 40 miles southeast of downtown, straddling the border of Tennessee and North Carolina. 520,000 acres encompass over 800 miles of trails for hiking and horseback riding; 735 miles of streams for fishing; many developed and backcountry campsites; spectacular scenery and views from peaks over 6,000 feet; several visitors centers with interpretative exhibits and artifacts. The most visited National Park in the U.S. No charge for park access. Donations accepted.