



Evolution **2011**
The University of Oklahoma™ June 17-21

The American Naturalist



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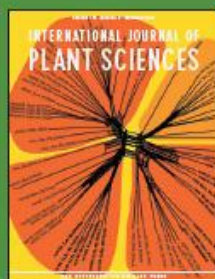
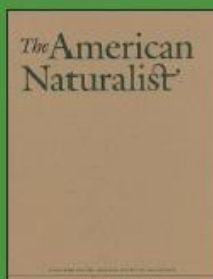
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Welcome to Evolution 2011

We want to welcome you to the Evolution 2011 meeting here in Norman, Oklahoma. As the hometown to The University of Oklahoma (OU), the state's flagship university, we hope your visit to Norman will be a memorable one. Norman is situated geographically in the center of Oklahoma where the eastern deciduous forest meets the southern Great Plains consisting of mixed short-grass/tall-grass prairie. Rolling hills and mixed savannah (i.e. cross-timbers) dominate the landscape in central Oklahoma. We hope that you have an opportunity to explore the natural beauty of Oklahoma, which has *the second highest number (12) of EPA level-III eco-regions in the U.S.* (trailing only California with 13). In addition, Norman and OU are home to a number of exceptional museums and collections including: (i) the Sam Noble Oklahoma Museum of Natural History (SNOMNH); (ii) the History of Science Collection with over 91,000 volumes including every edition of every published work by Charles Darwin; (iii) the Fred Jones Jr. Museum of Art which houses one of the largest collections of French Impressionist art on a university campus. Oklahoma City, with its many sites and attractions is only a short 25-minute drive from Norman.

Thanks for coming and partaking of Oklahoma hospitality – we hope your visit will make you consider coming back for a longer stay to explore more of what Oklahoma has to offer. Boomer Sooner!

Larry Weider, Rich Broughton, Ingo Schlupp
Department of Zoology, The University of Oklahoma
Tri-Chairs, Evolution 2011 Organizing Committee

Acknowledgments

Many people have made Evolution 2011 a possibility, most notably members of the local organizing committee, in particular Deborah Haddock, Dan Hough, Rosemary Knapp, J.P. Masly, Bonny Million (webmaster), Joey Rodriguez, Gary Schnell, James Thompson, and Stephen Weldon, with additional assistance from Wayne Elisens, Cecil Lewis, and Brad Stevenson. We want to thank all the officers of the American Society of Naturalists, the Society of Systematic Biologists, and the Society for the Study of Evolution, and especially Butch Brodie, Charlie Fenster, Jonathan Losos, David Mindell, Allen Orr, David Reznick, Bob Ricklefs, Judy Stone, and Kelly Zamudio. Mitch Cruzan, our 2010 host, was an invaluable source of information, guidance, and “moral support”. Education activities for the meeting have been organized by Mike Antolin, Scott Edwards, Kristin Jenkins, Louise Mead, and Tom Meagher. Thanks to Hilmar Lapp for organizing the iEvoBio conference, and all the symposia organizers and contributors. We thank Rob Brandt and Bill Dahl in the SSE office for their invaluable assistance.

We thank all our sponsors and sponsoring units, in particular the OU VP for Research; College of Arts & Sciences Dean's Office; Department of Zoology, OU Biological Station, Oklahoma Biological Survey, SNOMNH, University of Oklahoma Libraries, and Norman Convention & Visitors Bureau. Special thanks to Kerry Magruder (History of Science Collections) and Ghislain d'Humieres (Director, Fred Jones Jr Art Museum). We thank Cathy Baker and her staff at the John Q. Hammons Embassy Suites Hotel and Conference Center, and Colleen Duncan and her child care staff.

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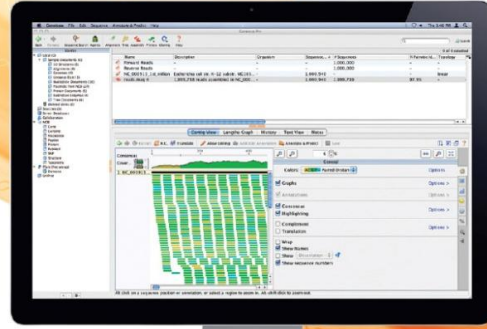


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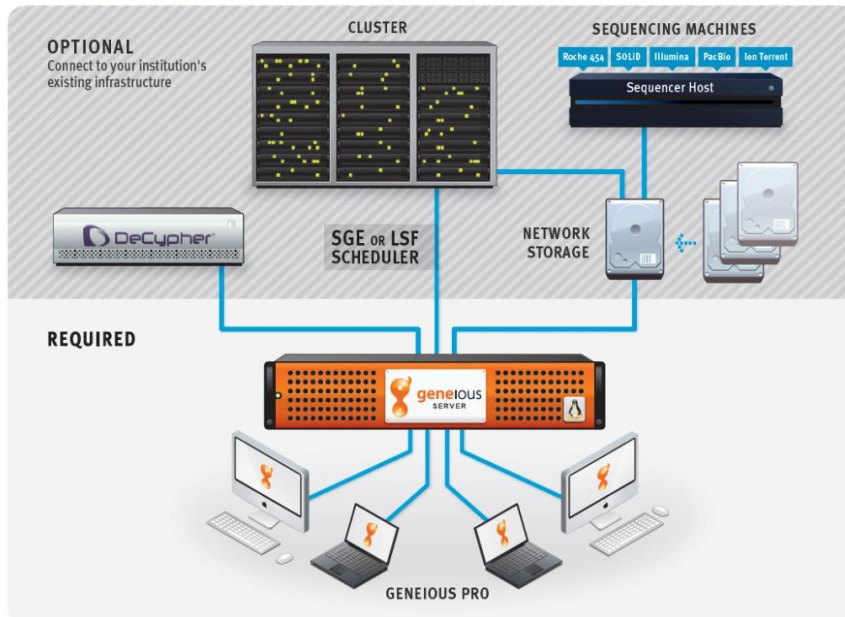


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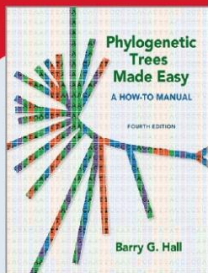


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WHAT'S NEW FROM Sinauer Associates

Phylogenetic Trees Made Easy: A How-To Manual

FOURTH EDITION
Barry G. Hall

Phylogenetic Trees Made Easy leads the reader, step by step, through identifying and acquiring the

sequences to be included in a tree, aligning the sequences, estimating the tree, and drawing the tree for presentation to an intended audience. Prompted by the development of new versions of MEGA and MrBayes, the Fourth Edition introduces a new web-based tool, GUIDANCE, that facilitates making robust alignments, as well as the estimation of phylogenetic networks for circumstances where trees are an inadequate means of describing historical relationships. The new edition is organized into 16 (versus 11) chapters to better isolate important topics and illustrated by new full-color screen shots throughout. "Learn More" boxes present background on the various concepts and methods, and a website (sites.sinauer.com/hall4e) provides files needed for working through the tutorials in the text.

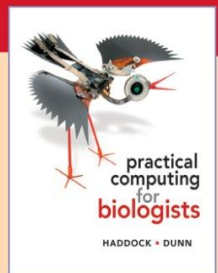
2011, 282 pages, 221 illustrations, ISBN 978-0-87893-606-9, \$49.95 paper

Practical Computing for Biologists

Steven H. D. Haddock and Casey W. Dunn

Many biologists find themselves facing exponentially larger data sets and analyses that require new computational skills. *Practical Computing for Biologists* starts from the ground up, focusing on general skills that can be used in a variety of contexts. In one place, it pulls together a broad range of powerful and flexible computational tools that are applicable to ecologists, molecular biologists, physiologists, and anyone who has struggled with large or complex data sets. Illustrated in color and with immediately useful examples, the book goes far beyond the subjects taught in most programming and bioinformatics courses. Topics include reformatting text, working at the Unix command line, programming in Python, creating and editing graphics, and working with databases and remote computers. It is designed to be used as a self-guided resource for researchers, a companion book in a course, or as a primary textbook.

2011, 538 pages, 65 illustrations, ISBN 978-0-87893-391-4, \$59.95 paper



ALSO OF INTEREST

Bell et al: **Evolution since Darwin: The First 150 Years**
Futuyma: **Evolution, SECOND EDITION**



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Registration and General Information

Location

Evolution 2011 takes place at the John Q. Hammons Embassy Suites and Conference Center in Norman, Oklahoma, June 17-21, 2011. Conference registration is in the lobby in front of Oklahoma Ballroom G. Symposia, special lectures, concurrent sessions and the Awards Banquet will be held in the Oklahoma Ballrooms A-C and Boomer A & B. Poster sessions, sponsor exhibits, receptions and coffee breaks will be held in Oklahoma Ballroom F-J.

Registration and Information Desk

Staff from the SSE Business Office and University of Oklahoma, Conference Services will attend the registration desk during the times listed below. Information about Oklahoma and the vicinity is available at the Evolution 2011 Registration Desk.

Registration / Help Desk hours:

Friday, June 17	8:00 AM – 7:00 PM
Saturday, June 18	7:00 AM – 5:00 PM
Sunday, June 19	8:00 AM – 5:00 PM
Monday, June 20	8:00 AM – 5:00 PM
Tuesday, June 21	8:00 AM – 5:00 PM

Student Volunteers

Student volunteers are on duty throughout the conference to assist as room monitors, attend the registration desk and to act as conference guides.

Name Badges

Your name badge is your entrance ticket to all symposia, concurrent sessions, poster and exhibit sessions and social events. Please remember to always wear your name badge.

Presentations

The scientific sessions will be located in the John Q. Hammons Embassy Suites and Conference Center in Norman, Oklahoma. Speakers in concurrent sessions are limited to 15 minutes including 12 minutes for presentations and 3 minutes for questions. Talks for invited symposia are scheduled to run for 30 minutes each unless indicated otherwise. If you are presenting a talk please leave time for questions. Consult the schedule of symposia and concurrent sessions to confirm the time and location of your talk.

Each meeting room is equipped with a laptop PC, LCD projector, microphone, and is hosted by a session chair. A student A/V volunteer will be available to transfer presentations to the computer desktop and to start each presentation. Notebook computers are equipped with Windows, Microsoft PowerPoint and Acrobat Reader. **It is not possible under any**

circumstance for presenters to use their own laptop computers. PowerPoint or PDF files must be provided to the room monitor before the start of a session on a CD or a USB Flash Drive. Please report to your assigned room location and identify yourself to the A/V volunteer at least 20 minutes before the beginning of the session. Presenters are encouraged to use practice rooms to test presentations for compatibility with the equipment that is provided.

Session Chairs

If you are chairing a session, please arrive approximately 30 minutes early to ensure that all presentations are ready, and that the scheduled presenters are accounted for. **It is imperative that talks remain on schedule to minimize disruptions as people move among the session rooms.** The Chair should alert speakers when 3 minutes remain and, if necessary, when 1 minutes remains. If a presenter finishes early, the Chair should help the previous presenter to field questions and answers. In the event of a cancellation, the Chair should announce a pause in the session so that talks remain on schedule.

Poster Sessions

Poster sessions and receptions are schedule 7:00 – 9:00 PM on Sunday June 19 (Poster Session A) and June 20 (Poster Session B). The sessions will be held in Oklahoma Ballroom F-J. Each poster has 120 cm wide x 120 cm (4 x 4 ft) space for their poster. Posters may be attached using provided push pins. Each poster is assigned a numbered location. Please place your poster at the location corresponding to your presentation number. Posters for **Session A** should be displayed starting at **8:00 AM on Sunday until 9:30 PM** and for **Session B** from **8:00 AM on Monday until 9:30 PM on Tuesday**. Presenters should attend their posters during the receptions for each session to explain your study and answer questions.

Refreshments

Morning and afternoon refreshment breaks will be available in Oklahoma Ballroom F-J. on Saturday June 18 through Tuesday, June 22. Morning breaks run 10:00 – 10:30 AM and afternoon breaks run 3:00 – 3:30 PM. Meals are not provided except for some of the workshops and information sessions. Coop Beer will be provided by Sooner Legends Inn and Suites and will feature Horny Toad Cerveza, Zeppelin German Wheat, Native Amber and the F5 IPA. Beer for receptions and the picnic will require a drink ticket. **Participants are encouraged to use personal reusable drink containers to reduce waste.** A list of local restaurants, brewpubs, coffee shops, etc. is included in this program.

Social Functions

All registered attendees and their paid guests are invited to the following events:

- Opening Reception, Friday, June 17, 7:00 – 9:00 PM
- Picnic, Saturday, June 18, 6:30 – 10:00 PM, University of Oklahoma, South Oval
- Poster Receptions, Sunday, June 19 and Monday, June 20, 7:00 – 9:00 PM in

Oklahoma Ballroom F-J.

The conference banquet takes place on Tuesday, June 21, 6:30 – 10:00 PM in the Oklahoma Ballroom E. Advance purchase of tickets is required for the banquet. A limited number of banquet tickets may be available for purchase at the registration desk. Participants are responsible for all tickets. Lost tickets will not be replaced.

Picnic at the South Oval

The Picnic at the South Oval will feature a live performance by the Oklahoma bluegrass band, *Mountain Smoke* from 7:00 – 9:00 PM. Tours of the Fred Jones Jr. Museum and the History of Science Collection in the Bizzell Library will be offered at no cost during the picnic. The main course will be Oklahoma Barbeque.

Transportation will be provided from the Conference Center to the South Oval.

Personal Electronic Devices

Please turn off or mute all personal electronic devices while in all meeting rooms. Please mute the sound on your personal laptops.

Language

All conference activities including talks and posters will be presented in English.

First Aid

In case of emergency, please dial 911 and contact the Registration/Help desk.

Time Zone

The time zone in Norman, OK is Central Daylight Time (CDT), 5 hours behind GMT.

Exhibits

Exhibit booths are in the Oklahoma Ballroom F-J. Exhibitor hours are:

Saturday, June 18 9:30 AM to 6:30 PM

Sunday, June 19 9:30 AM to 9:00 PM

Monday, June 20 9:30 AM to 9:00 PM

Tuesday, June 21 9:30 AM to 5:00 PM

Message Board

A message board is located near the Registration/Help Desk. Participants are welcome to post messages about events, jobs, announcements and personal messages for other participants.

Internet Access

Free wireless internet is available throughout the John Q. Hammons Embassy Suites and Conference Center for the duration of the conference. Use the password 'password' to access the wireless network.

Transportation

Evolution 2011 will be providing charter buses to and from the University Dormitories, the Opening Reception and the Picnic at the University of Oklahoma, South Oval. During lunches, shuttles will be provided to Main St. and Campus Corner eateries.

Taxicab Service

Taxis are scarce in Norman, Oklahoma, so you will need to call for a pickup. The following companies are available:

Boomer Cab	405-309-9599
A1 Taxi Services	405-321-3111

Childcare

Child supervision and activities will be available on-site at the **John Q. Hammons Embassy Suites Hotel and Conference Center** during the four days of the meeting. Childcare at Evolution meetings began through a grant from the Elsevier New Scholars Program and is continuing for 2011 for parents who are members of SSE, SSB and/or ASN. Morning and afternoon sessions will be available each day providing fun activities for kids in a safe, caring environment.

Children must be at least one year old at the time of the meeting. We regret that care of infants less than one year is not possible, however, a nursing room will be available. If you have any questions about this program, please contact Ms. Colleen Duncan at .

Parking

Parking is available on the south and east side of the conference center at no charge.

Medical Services and Emergency Numbers

For Fire, Police and Medical Assistance dial: 911

An emergency room and other medical treatment are available at:

Near Convention Center –

Norman Regional HealthPlex	3300 HealthPlex Parkway	405-515-1000
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Near Dorms –

Goddard Health Center	620 Elm Avenue	405-325-4611
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iEvoBio Conference

iEvoBio ([Informatics for Phylogenetics, Evolution and Biodiversity](#)) will be held jointly with the Evolution Meetings as a satellite conference (June 21-22, 2011). iEvoBio brings biologists working in evolution, systematics, and biodiversity together with software developers and mathematicians to catalyze the development of new tools and increase awareness of the possibilities offered by existing technologies (from reusable software to mega-scale data analysis to rich visualization). Over 300 participants attended the successful [inaugural meeting](#) in 2010 in Portland, Oregon. Following the model of last year's meeting, the 2011 meeting will feature contributed talks and two keynote presentations, as well as more dynamic and innovative elements, including lightning talk-style sessions, a software bazaar, and Birds-of-a-Feather gatherings.

There will also be a Challenge Prize again; after the 2010 Challenge on *Visualization of Evolutionary Data*, the theme for the **2011 Challenge is Data Integration**. iEvoBio is supported by the National Evolutionary Synthesis Center ([NESCent](#)), the Society for the Study of Evolution ([SSE](#)), the Society of Systematic Biologists ([SSB](#)), and the Encyclopedia of Life ([EOL](#)).

Field Trips

Wichita Mountains National Wildlife Refuge

Take a trip to the Wichita Mountains National Wildlife Refuge (approx. 1.5 hr. drive southwest of Norman)

This was the first National Wildlife Refuge established in 1905 by President Theodore Roosevelt. The unique geology of the region (i.e. "sky islands") and the variety of native and introduced flora and fauna, make for an exceptional outing. This is a spectacular area for viewing bison and elk.

Cost covers transportation and entry to wildlife refuge and a boxed lunch. Wednesday, June 22, departs at 8:00 AM and return 6:00 PM at the earliest. Departs from in front of Embassy Suites.

Arbuckle Mountain Fossil Dig

Take a trip to the Arbuckle Mountains, the oldest mountain range in North America, for a fossil dig.

Dr. Steve Westrop, Curator of Invertebrate Paleontology at the Sam Noble Oklahoma Museum of Natural History (SNOMNH) will lead an all-day excursion to the dig site, where you will find marine fossils to add to your home collection.

Cost covers transportation and entry to Fossil Dig and a boxed lunch.

Wednesday, June 22, departs at 8:00 AM and return 6:00 PM at the earliest. Departs from in front of Embassy Suites.

Announcements

Student Presentation Award from SSB

The Ernst Mayr Award is given to an outstanding student talk in the field of systematics. The award consists of \$1000 and a set of available back issues of Systematic Biology. Members of the Society who are students or have completed their Ph.D. within the last 15 months are eligible. All candidates will participate in the SSB Ernst Mayr Symposium on Monday, June 20 at 9:00 AM in Oklahoma Ballroom E. Applicants may be from any country, but must be members of SSB, and are advised to join the Society as soon as possible to be considered. Previous Mayr award winners are not eligible.

The W.D. Hamilton Award from SSE

The Society for the Study of Evolution is offering “The W.D. Hamilton Award” for an outstanding student presentation at the annual meeting. Presentations will be judged by a committee of SSE members. Applicants will present their papers during regular sessions appropriate for their topic. The winner will receive an award of \$1000, a year of membership to the Society for the Study of Evolution, and one year’s free subscription to the journal “Evolution.” Runners-up will each receive one year of membership to the Society for the Study of Evolution, plus one year’s subscription to the Journal “Evolution.”

Student Volunteer Opportunities

Student volunteer positions are offered to student society members (ASN, SSB, or SSE) on a first-come basis. Volunteers will work for one full day during the meeting. If selected, you will be notified before the meeting and offered the opportunity to select job preferences, but there is no guarantee that you will get your top choices. Typical jobs would include being a session monitor (helping with computer/AV Equipment) or working at the registration desk. Reimbursements for 50% of registration (early registration rate for the student members) will be provided to volunteers who complete their work assignments.



READY FOR SOME REEL SCIENCE?

Join us for the NESCent Evolution Film Festival
Monday, 6:30 – 7:30

The National Evolutionary Synthesis Center (NESCent) is sponsoring the first annual NESCent Evolution Video Contest and Film Festival at Evolution 2011. We invited the evolution community to submit videos that explain a fun fact, key concept, compelling question, or exciting area of evolution in three minutes or less. Come to the film festival to view and vote on the finalists. We'll supply the popcorn and drinks! Winners will be announced/screened at Tuesday's banquet.

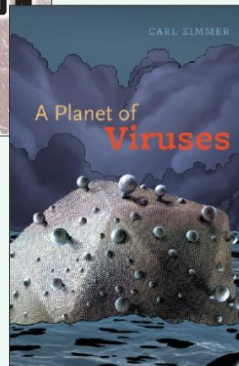
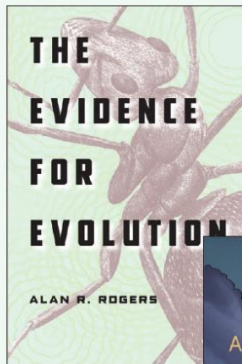
To find out more about the film festival or learn about research opportunities and teaching resources from NESCent, visit our booth in the exhibit hall.

www.nescent.org



EVOLUTION

FROM CHICAGO



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Professor of Biology, Brown University

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June 18th, 12:00 PM noon
Embassy Suites Hotel and Conference Center,
Oklahoma Ballroom E
Norman, Oklahoma

Lecture is open to the general public


Student Travel Awards

Student Travel Awards from ASN

The American Society of Naturalists will award \$500 each to as many as 15 graduate students to help defray the cost of attending the annual meeting of the American Society of Naturalists. Awards will be chosen from a random drawing of eligible students who have indicated their society membership at the time of registration. To be eligible, the student must be a student member of ASN, and must not have received a travel award the previous year. The student must also be presenting a paper or a poster at the meeting.

Student Travel Award from SSE

The Society for the Study of Evolution will award \$500 each to graduate students to help defray the cost of attending the annual meeting of the Society for the Study of Evolution. Awards will be chosen from a random drawing of eligible students who have indicated their society membership at the time of registration. To be eligible, the student must be a student member of SSE, and must not have received a travel award the previous year. The student must also be presenting a paper or a poster at the meeting. Awardees can collect their award at 6:30 PM on Sunday, June 19 after the SSE Presidential Address outside of Oklahoma Ballroom E



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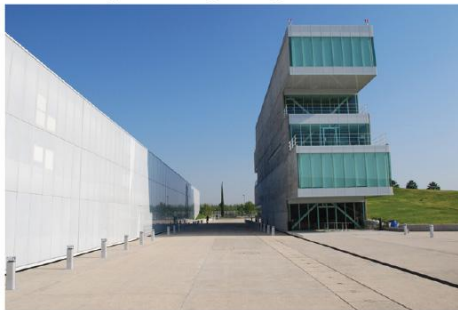
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Publisher of *Journal of Heredity*

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Register by June 25 at

<http://www.theaga.org/2011/>

Undergraduate Diversity at Evolution 2011

For the 9th consecutive year the National Science Foundation has funded a program to send talented and diverse undergraduates from across the US to the annual meetings of the Society for the Study of Evolution and the Society for Systematic Biologists (SSE/SSB). This year the program is again being organized by **Scott Edwards** (Harvard University), **Jory Weintraub** (NESCent) and **Richard Kliman** (Cedar Crest College, NJ). At NESCent, Director of Education and Outreach **Brian Wiegmann** (Duke University/NESCent) and NESCent staff helped organize the application portal and recruit applicants through their network of student contacts. The program covers the costs of travel to the meetings, registration and lodging for 25 undergraduates from the US and Puerto Rico. Students will present a poster on their research in a designated area of one of the poster sessions. In addition, the students will receive mentoring by a diverse and enthusiastic group of graduate students, postdocs and faculty from across the country and from many different subdisciplines within evolutionary biology.

Please help us celebrate this diverse and talented group of students at Evolution 2011 **events open to all:**

- Undergraduate Diversity participants will present their **posters** at the first poster session on Sunday 19 June from 7:00-9:00 pm in the exhibits hall OK-F-J.
- The **Undergraduate Diversity Social** is scheduled for Monday 20 June from 5:00-6:30 pm in Sooner A&B.
- The **Undergraduate Futures Talk** is scheduled for Tuesday 21 June from 4:00-5:30 pm in Sooner A&B.

The **Undergraduate Diversity Social** will provide a fun and informal setting for you to meet our 2011 Undergraduate Diversity participants, who this year hail from Alaska all the way to Puerto Rico. The **Undergraduate Futures Talk** will consist of a short brainstorming seminar on career options as well as a panel of a graduate student, postdoc and faculty member to whom students can ask questions about careers using training in evolutionary biology. **Everyone is welcome to these events**, and they are a great way to meet the next generation of evolutionary biologists and to share your experiences and advice with this talented group.

We are particularly grateful to **Larry Weider, Rich Broughton, Ingo Schlupp, Joey Rodriguez, Deborah Haddock, and the local Organizing Committee** at the University of Oklahoma for their enthusiastic support of this program, which benefits everyone in the societies supporting the meeting. Look out for the undergraduate posters at the meeting, and spread the word about this important opportunity for students embarking on careers in evolutionary biology. For further information about this and next year's program, go to:

<http://www.oeb.harvard.edu/faculty/edwards/community/application.html>

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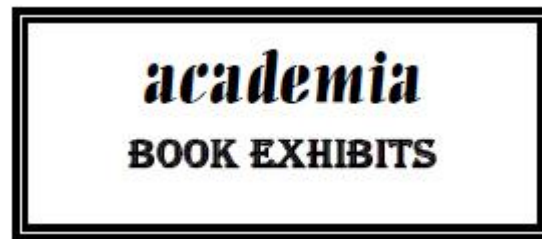
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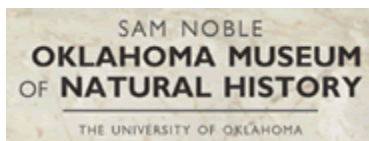
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Restaurants and Pubs

Below is a select list of establishments and attractions that your colleagues have compiled. Shuttle service will be provided during lunch to take groups to Campus Corner and Main St. An interactive version of the establishment map can also be found at <http://batchgeo.com/map/4bf0a4f6f982f54bbc21d3daeb68e15f>

Mexican Food

Mamaveca Mexican Restaurant
2551 Hemphill Dr.

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(405) 573-4003

Tarahumara's Mexican Café
702 N. Porter Ave

\$-\$\$
(405) 360-8070

Pepe Delgados
786 Asp Ave.

\$-\$\$
(405) 321-6232

American Food

Interurban Restaurant
115 W. Main St.

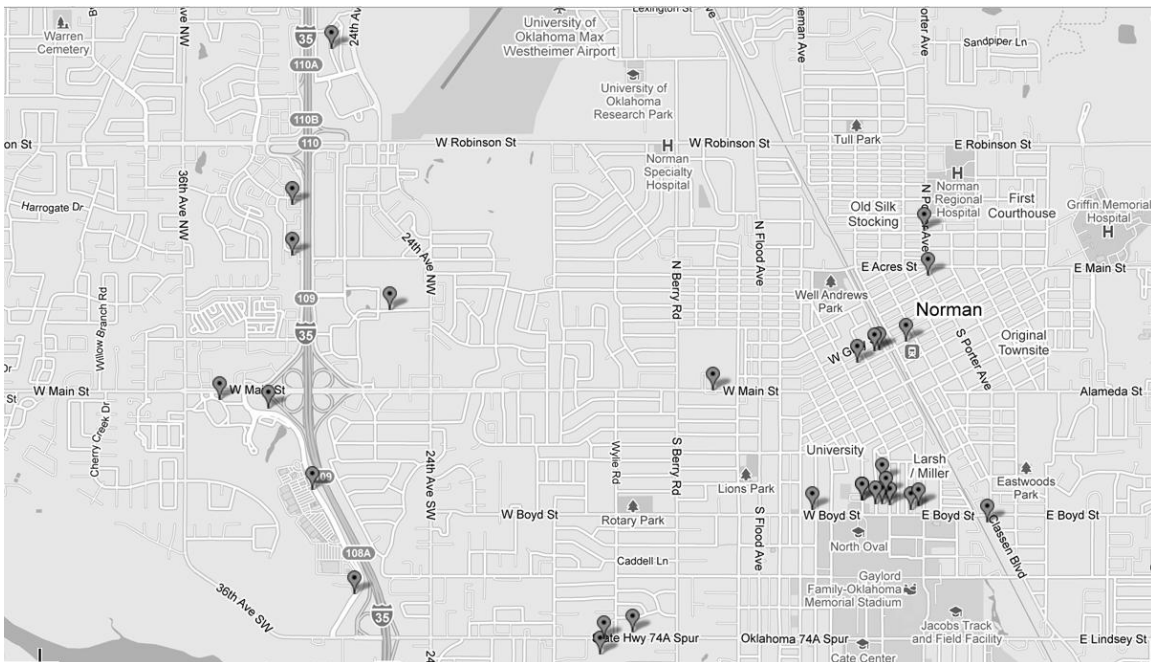
\$-\$\$
(405) 321-7150

Blackbirds GastroPub
575 S. University Dr.

\$-\$\$
(405) 928-5555

The Mont Restaurant
1300 Classen Blvd.

\$-\$\$
(405) 329-3330



Barbeque

Rudy's Country Store and Bar-B-Q
3450 Chataqua Ave (405) 307-0552 \$-\$\$

Van's Pig Stand
320 n. Porter Ave. (405) 364-0600 \$-\$\$

Ray's Barbeque
1514 W. Lindsey St. (405) 329-4040 \$-\$\$

Pizza

Hideaway Pizza
577 Buchanan Ave. (405) 292-4777 \$-\$\$

Jo's Famous Pizza
1522 W. Lindsey St. (405) 329-2378 \$-\$\$

Sandro's Deli & Pizza
914 W. Main St. (405) 701-8822 \$-\$\$

Italian Food

Gaberino's Homestyle Italian
283 34th Ave SW (405) 310-2229 \$-\$\$

Carino's Italian
970 Ed Noble Pky. (405) 447-5000 \$\$-\$\$\$

Olive Garden
117 Ed Noble Pky (405) 573-0188 \$\$-\$\$\$

International Food

Tea Café on the Corner
788 Asp Ave (405) 310-6655 \$-\$\$

Misal Bistro
580 Ed Noble Pky (405) 579-5600 \$-\$\$

Greek House
768 Jenkins Ave. (405) 364-6300 \$-\$\$

Asian Food

Pad Thai
119 W. Boyd St. (405) 360-5551 \$-\$\$

Sweet Basil Thai Cuisine
211 W. Main St. (405) 217-8424 \$-\$\$

Pei Wei Asian Dinner
1500 24th Ave NW (405) 364-1690 \$-\$\$

Steak Houses

Saltgrass Steak House
650 N. Interstate Dr. (405) 292-5600 \$\$-\$\$\$

Outback Steakhouse
860 N. Interstate Dr. (405) 447-6770 \$\$-\$\$\$

Fine Dining

Benvenuti's Restaurant
105 W. Main St. (405) 310-5271 \$\$-\$\$\$

Legend's Restaurant
1313 W. Lindsey St. (405) 329-8888 \$\$-\$\$\$

Pubs

The Abner
121 E. Main St. (405) 928-5801 \$-\$\$

Library Bar & Grill
607 W. Boyd St. (405) 366-7465 \$-\$\$

Blackbirds GastroPub
575 S. University Dr. (405) 928-5555 \$-\$\$

O'Connell's Irish Pub & Grill
769 Asp Ave (405) 217-8454 \$-\$\$

The Deli
309 White St. (405) 329-3534 \$-\$\$

Calendar of Events

Friday, June 17

Lobby	8:00 AM-9:00 AM	Coffee & Bagels (Workshop & Joint Council)
UniversityA	8:30 AM-5:00 PM	Evolution 101 Workshop
JQH BdRm	9:00 AM-Noon	ASN/SSB/SSE Joint Council Meeting
UniversityB	Noon-1:30 PM	Society Council Members Lunch
UniversityC	Noon-1:30 PM	Evolution 101 Workshop Lunch
Noble	1:30 PM-5:00 PM	ASN Council Meeting
Northpark	1:30 PM-5:00 PM	SSB Council Meeting
JQH BdRm	1:30 PM-5:00 PM	SSE Council Meeting
SNOMNH	7:00 PM-9:00 PM	Opening Reception, Sam Noble Oklahoma Natural History Museum (OU campus)

Saturday, June 18

OK-A-D UN-A, B, C	8:00 AM-5:00 PM	Symposia & Concurrent Sessions
OK-E	8:30 AM-Noon SSB	Symposium – Unified Approaches for Understanding Patterns of Character Evolution and Diversification Organizers: Stacey D. Smith & Boris Igić
OK-F-J	10:00 – 10:30AM	Coffee Break
SoonerA&B	10:00AM-Noon	SSE Education Workshop – Evolutionary Medicine
OK-E	Noon-1:30 PM S.J.	Gould Award Lecture <i>(So Simple a Beginning - Why Evolution Matters in America Today - Kenneth Miller)</i>
OK-E	1:50 PM-5:00 PM	SSE Presidential Symposium – Adaptation Organizer: H. Allen Orr

(Note: concurrent afternoon sessions will reconvene at 2:00 PM in OK- A, B, C, D and UN- A, B, C)

OK-F-J	3:00 PM-3:30 PM	Coffee Break
OK-E	5:15 PM-6:15 PM	SSB Presidential Address (<i>The next generation of systematic biology</i> – Keith Crandall)
OK-E	6:15 PM-6:45 PM	SSB Membership Meeting
OU S. Oval	6:30 PM-10:00 PM	Picnic on the South Oval – OU campus

Sunday, June 19

OK-A - D UN-A, B, C	8:00 AM-5:00 PM	Symposia & Concurrent Sessions
OK-E	8:30 AM-12:00 PM	SSE Evolutionary Medicine Symposium in Honor of George C. Williams Organizers: Michael Antolin & Kristen Jenkins
OK-F-J	10:00AM –10:30AM	Coffee Break
Sooner A	Noon-1:30 PM	Evolution Editorial Board Lunch
Sooner B	Noon-1:30 PM	SSB Editorial Board Lunch
Boomer A&B	12:15-1:15 PM	Evolutionary Medicine Symposium Lunch
OK-E	1:30 PM- 5:00 PM	SSE Evolutionary Medicine Symposium in Honor of George C. Williams (continued) Organizers: Michael Antolin & Kristen Jenkins
UN-C	1:20 PM-5:00 PM	SSB Symposium – The Promises and Pitfalls of Incorporating Next-Generation Sequencing Data in Phylogeography. Organizers: Emily Moriarty-Lemmon, Alan Lemmon, Bryan Carstens
OK-F-J	3:00PM – 3:30PM	Coffee break
OK-E	5:30 PM-6:30 PM	SSE Presidential Address (<i>Two flies on an island: A case study of speciation</i> - Jerry Coyne)
OK-E	6:30 PM-7:00 PM	SSE Membership Meeting

Sooner A&B 6:30 PM-7:30 PM ASN-sponsored “Happy Hour” –
grad/mentors
(David Reznick & Courtney Fitzpatrick)

OK-F-J 7:00 PM-9:00 PM Poster Session A & Reception

Monday, June 20

OK-A-D 8:00 AM-5:00 PM Symposia & Concurrent Sessions
UN-A-B
SoonerA&B
BoomerA&B

OK-E 9:00 AM-11:30PM SSB Symposium: Ernst Mayr Symposium
Organizer: Sydney Cameron (U. of Illinois)

OK-F-J 10:00 AM-10:30 PM Coffee Break

OK-E 12:00 PM-1:00 PM NSF Funding Opportunities (Sam Scheiner)

Sooner A Noon-1:30 PM American Naturalist Editorial Board Lunch

OK-E 1:20 PM-5:00 PM ASN Vice-Presidential Symposium: A Critical
Look at Reciprocity in Ecology & Evolution
Organizer: David Reznick

OK-F-J 3:00 PM-3:30 PM Coffee Break

Sooner A&B 5:00 PM-6:00 PM Undergraduate Diversity Social

OK-E 5:30 PM-6:30 PM ASN Presidential Address (*My Life as a
Naturalist* - Robert Ricklefs)

OK-E 6:30 PM-7:00 PM ASN Membership Meeting

BoomerA&B 6:30 PM-7:30 PM NESCent “Evolution Film Festival”

OK-F-J 7:00 PM-9:00 PM Poster Session B & Reception

Tuesday, June 21

OK-E 8:00 AM-Noon SSE Symposium: Experimental Evolution
Organizers: Rhonda Snook & Nick Colegrave

OK-A, B, C UN-A, B, C	8:00 AM-5:00 PM	Symposia & Concurrent Sessions
OK-D	8:00 AM-5:00 PM	iEvoBio Sessions
OK-F-J	10:00AM-10:30AM	Coffee Break
Sooner A	Noon-1:30 PM	ASN/SSB/SSE Joint Council Exit Meeting Lunch
OK-E	1:20 PM-4:00 PM	ASN Young Investigator Symposium Organizer: Robert Ricklefs
OK-F-J	3:00 PM-3:30 PM	Coffee Break
OK-E	4:00 PM-4:30 PM	Fisher Award Address
OK-E	4:30 PM-5:00 PM	Dobzhansky Prize Address
Sooner A&B	4:00 PM-5:30 PM	Undergraduate Diversity Futures Discussion
Noble	5:00 PM-6:30 PM	SSE Council Exit Meeting
Northpark	5:00 PM-6:30 PM	ASN Council Exit Meeting
OK-F Hotel Atrium	6:30 PM-7:00 PM	Banquet Reception
OK-F	7:00 PM-10:00 PM	Banquet

Wednesday, June 22

Off Site	8:00 AM – 6:00 PM	Field trips
	8:00 AM-5:00 PM	iEvoBio

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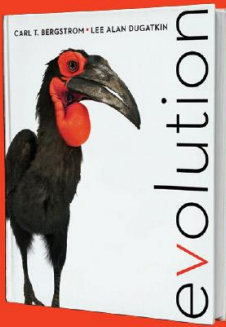
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FRIDAY, JUNE 17TH

8:30 AM - 5:00 PM W1 Workshop **Oklahoma C**
Evolution 101 - Chair: Kristin Jenkins; Louise Mead

SATURDAY, JUNE 18

8:30 AM - 12:00 PM **Sym1 Symposium** **Oklahoma E**
SSB Symposium: Unified Approaches for Understanding Patterns of Character Evolution and Diversification -- Chairs: Stacey Smith; Boris Igic

- 8:30 Sym13001 IGIC, BORIS - SMITH, STACEY*
Introduction to models of character state-dependent diversification
- 9:00 Sym13002 FITZJOHN, RICHARD
Stochastic character mapping and state dependent diversification
- 9:30 Sym13003 BOKMA, FOLMER* - STADLER, TANJA
Estimating speciation and extinction rates with incomplete phylogenies
- 10:00 Break
- 10:30 Sym13005 GOLDBERG, EMMAE
Modes of speciation and character change from phylogenetic trees
- 11:00 Sym13006 WAGNER, PETER
Using stratigraphic compatibility to reveal general relationships between character combinations and diversification
- 11:30 Sym13007 POLLY, P. DAVID* - LAWING, A. MICHELLE
On morphological clocks: why the phenotype is a poor predictor of time since common ancestry

8:45 AM - 10:00 AM **001 Contributed Papers** **University C**
Behavior and Social Evolution I -- Chair: Carlos Botero

- 8:45 001001 BOTERO, CARLOS* - RUBENSTEIN, DUSTIN
Variable environments, fluctuating selection and the stability of breeding partnerships in birds
- 9:00 001002 SONG, ZHIYUAN* - ROUGHGARDEN, JOAN - FELDMAN, MARCUS
Modelling the coevolution of pair-bond networks and parental care
- 9:15 001003 MOCK, DOUGLAS* - SCHWAGMEYER, P. L. - DUGAS, MATTHEW - STRICKLER, STEPHANIE
Evolution of parental favoritism
- 9:30 001004 FULMER, ANDREW* - KNORNSCHILD, MIRJAM
‘The nearness of you’ social spacing for harem maintenance in *Saccopteryx bilineata*

- 9:45 001005 BONO, JEREMY* - MATZKIN, LUCIANO - KELLEHER, ERINS - MARKOW, THERESE
Postmating transcriptional changes in reproductive tracts of con- and heterospecifically mated
Drosophila mojavensis females

8:30 AM - 10:00 AM 002 Contributed Papers University B
Invasives/Hybridization - Plants -- Chair: Ryan Thum

- 8:30 002001 THUM, RYAN* - ZUELLIG, MATTHEW
Rapid adaptation to anthropogenic environments via hybridization?: Invasive hybrid
watermilfoil genotypes are more common than parental genotypes in herbicide-treated lakes
- 8:45 002002 LAWTON-RAUH
Evolutionary dynamics of herbicide tolerance in genus *Amaranthus*
- 9:00 002003 WASELKOVA, KATHERINE* - OLSEN, KENNETH - SCHAAL, BARBARA
Weeding through the evolutionary past: genetic evidence for the origin of the Midwestern
agricultural weed *Amaranthus tuberculatus* (waterhemp)
- 9:15 002004 TAVAILIRE, HF* - BUGBEE, G - LARUE, ELIZABETH - THUM, RYAN
The roles of hybridization and cryptic ecological diversity in a biological invasion
- 9:30 002005 VALLEJO-MARIN, MARIO* - LYE, GILLIAN
Colonization and spread of *Mimulus guttatus* and its hybrids in the United Kingdom
- 9:45 002006 HUFFORD, MATTHEW* - LUBINSKY, PESACH - PYHÄJÄRVI, TANJA - ELLSTRAND,
NORMAN - ROSS-IBARRA, JEFFREY
Dueling genomes: Reciprocal gene flow in hybrid swarms of maize and its wild relative, *Zea
mays* ssp. *mexicana*

9:15 AM - 10:00 AM 003 Contributed Papers University A
Conservation/Diversity -- Chair: Stanley Rice

- 9:15 003001 HOELZER, GUY* - DREWES, RICH
Wedge effects: the shape of dispersal barriers and spatial population genetics
- 9:30 003002 BONIN, CAROLINA* - GOEBEL, MICHAEL - O'CORRY-CROWE, GREGORY - BURTON,
RONALD
High genetic diversity after a local extinction: the role of mating strategies in Antarctic fur seals
- 9:45 003003 MCOWEN, CHRIS* - BRUMMITT, NEIL - FOREST, FELIX - NICLUGHADHA, EIMEAR -
MEAGHER, THOMAS
Integrating phylogenetic and functional diversity into conservation policy

8:30 AM - 10:00 AM 004 Contributed Papers
Diversification - Plants I -- Chair: Ya Yang

Oklahoma A

- 8:30 004001 YANG, YA* - BERRY, PAUL
The evolutionary tale of the largest C4 eudicot lineage: North American desert origin, highly reticulated evolution and extraordinary Hawaiian Island radiation in the Chamaesyce clade of *Euphorbia* (Euphorbiaceae)
- 8:45 004002 HEUERTZ, MYRIAM* - DICK, CHRISTOPHER - HARDY, OLIVIER
Transatlantic species cohesion since the mid-Miocene in the ancient tropical tree *Symphonia globulifera* (Clusiaceae)
- 9:00 004003 CROSBY, KATE* - LATTA, ROBERT
Phylogeography and colonization history of the invasive Mediterranean annual grass *Avena barbata* in California
- 9:15 004004 PAPADOPULOS, ALEXANDER
Speciation with gene flow on Lord Howe Island
- 9:30 004005 GÖBBELER, KATRIN* - BRUEDERLE, LEO
Molecular phylogeny and historical biogeography of the circumpolar arctic plant species *Eutrema edwardsii* (Brassicaceae)
- 9:45 004006 ARAKAKI, MONICA* - CHRISTIN, PASCAL-ANTOINE - NYFFELER, RETO - LENDEL, ANITA - EGGLI, URS - OGBURN, R. MATTHEW - SPRIGGS, ELIZABETH - MOORE, MICHAEL - EDWARDS, ERIKA
Contemporaneous and recent radiations of the world's major succulent plant lineages

8:30 AM - 10:00 AM 005 Contributed Papers
Genetics of Morphology -- Chair: J.P. Masly

Oklahoma B

- 8:30 005001 MASLY, J.P.* - DALTON, J.E. - SRIVASTAVA, S. - CHEN, L. - ARBEITMAN, M.N.
The genetic architecture of a difference in male genital morphology between *Drosophila mauritiana* and *D. sechellia*
- 8:45 005002 GONG, ZHENQIANG - MATZKE, NICHOLAS* - ERMENROUT, BARD - SONG, DAWN - VENDETTI, JANN - MONTGOMERY, SLATKIN - GEORGE, OSTER
The evolution of patterns on *Conus* shells
- 9:00 005003 SCHMERLER, SAM - SCHMANDT, KAYA - CHATELET, DAVID - BEAULIEAU, JEREMY - CLEMENT, WENDY - DONOGHUE, MICHAEL - EDWARDS, ERIKA*
Of marginal interest: changes in leaf shape during evolutionary shifts between tropical and temperate habitats in *Viburnum* (Adoxaceae)
- 9:15 005004 SOULE, JACOB* - JUENGER, THOMAS
Genetic variation in life history and floral morphology in a desert annual: *Ipomopsis longiflora*

- 9:30 005005 SANTOS, EMILIA* - SALZBURGER, WALTER
The genetic and molecular basis of parallel evolution in egg-spots of cichlid fishes
- 9:45 005006 FULLER, BECKY
Rapid light-induced shifts in opsin expression: finding new opsins, discerning mechanisms of change, and implications for visual sensitivity

8:30 AM - 10:00 AM 006 Contributed Papers Oklahoma C
Molecular Evolution I -- Chair: Paul Zwiars

- 8:30 006001 ZWIERS, PAUL* - WIEDENFELD, DAVID - JIMENEZ-UZCATEQUI, GUSTAVO - DEEM, SHARON - CRUZ, MARILYN - VALKIUNAS, GEDIMINUS - MERKEL, JANE - HARTMAN, DANIEL - MILLER, DAVID - SARI, ELOISA - HIGASHIGUCHI, JENNI - RABENOLD, JESSICA - RABENOLD, ANDREA - PARKER, PATRICIA
Evidence of a resident species of *Plasmodium* in the Galapagos avifauna
- 8:45 006002 STORZ, JAYF* - PROJECTO-GARCIA, JOANA - CHEVIRON, ZACHARYA. - MORIYAMA, HIDEAKI - WEBER, ROYE. - FAGO, ANGELA
Adaptive altitudinal differentiation in hemoglobin function in Andean sparrows
- 9:00 006003 WEADICK, CAMERON* - CHANG, BELINDA
Molecular evolutionary analysis of duplicated RH2 opsins in African cichlids using Clade models
- 9:15 006004 POLLOCK, D.D.* - DE KONING, AP JASON - CASTOE, TODD - YOKOYAMA, KEN
Novel Bayesian solutions for investigating molecular coevolution and adaptation
- 9:30 006005 GLORIA-SORIA, ANDREA* - BUSS, LEO
Extraordinary levels of natural genetic diversity at an allorecognition locus in a colonial marine invertebrate
- 9:45 006006 TUCKER, ABRAHAM* - LYNCH, MICHAEL
Evolution of obligate asexuality in *Daphnia pulex*: genome wide comparison of 23 North American populations

8:30 AM - 10:00 AM 007 Contributed Papers Oklahoma D
Genomics I -- Chair: Ryan Norris

- 8:30 007001 TRAVERSE, CHUCK* - COOPER, VAUGHN
Evolutionary genomics of biofilm adaptation and diversification
- 8:45 007002 STRAUB, SHANNON* - FISHBEIN, MARK - WEITEMIER, KEVIN - PARKS, MATTHEW - CRONN, RICHARD - LISTON, AARON
Skimming the cream from the milkweed genome: Low coverage genome sequencing for phylogenetics and comparative genomics in *Asclepias*

- 9:00 007003 ALLEN, JULIE* - BURLEIGH, J. GORDON - REED, DAVID
Attempting phylogenetics in groups with unknown levels of diversity: have we sequenced enough bacterial lineages to accurately determine the number of endosymbionts in sucking lice?
- 9:15 007004 McCORMACK, JOHN* - FAIRCLOTH, BRANT - CRAWFORD, NICHOLAS - GOWATY, PATRICIA - HARVEY, MICHAEL - BRUMFIELD, ROBB T - GLENN, TRAVIS
DNA regions flanking ultraconserved elements are novel phylogenetic markers that facilitate species-tree analysis of the mammal and bird tree of life
- 9:30 007005 SUH, ALEXANDER* - KRIEGS, JAN OLE - BROSIUS, JÜRGEN - SCHMITZ, JÜRGEN
Mesozoic retroposons provide insights into early bird phylogeny
- 9:45 007006 WESTESSON, OSCAR* - LUNTER, GERTON - PATEN, BENEDICT - HOLMES, IAN
Accurate reconstruction of insertion-deletion histories by statistical phylogenetics

10:30 AM - 12:00 PM W2 Workshop **Sooner A&B**
SSE Education Workshop - Evolutionary Medicine -- Chairs: Kristin Jenkins; Louise Mead

10:30 SSE Education Workshop - Evolutionary Medicine

10:30 AM - 12:00 PM 008 Contributed Papers **University C**
Cooperation -- Chair: William Ratcliff

- 10:30 008001 RATCLIFF, WILLIAM* - DENISON, R. FORD - BORRELLO, MARK - TRAVISANO, MICHAEL
Experimental evolution of multicellularity
- 10:45 008002 HANSCHEN, ERIK* - LEGAC, MICKAEL - DOEBELI, MICHAEL
Convergence in the evolution of cooperation in colicinogenic *E. coli*
- 11:00 008003 SCHNEIDER, SCOTT* - NORMARK, BENJAMIN
Mutualistic interactions between *Melissotarsus* ants and armored scale insects: Trophobiosis in the absence of honeydew production
- 11:15 008004 BLEAKLEY, BRONWYN* - CAMPBELL, LAUREL
Does genetic variation for responsiveness to social environment influence indirect genetic effects on cooperation in guppies, *Poecilia reticulata*?
- 11:30 008005 WEBER, JESSE* - TONG, WENFEI - HOEKSTRA, HOPI
It takes two to burrow: the evolution of cooperation in *Peromyscus*
- 11:45 008006 DUGATKIN, LEE
Strange bedfellows, or what do Peter Kropotkin, Adam Smith, and J.B. Lamarck have in common?

10:30 AM - 12:00 PM 009 Contributed Papers**University B*****Invasives -- Chair: Christopher Toomajian***

- 10:30 009001 JAHNER, JOSHUA* - BONILLA, MELVIN - BADIK, KEVIN - SHAPIRO, ARTHUR - FORISTER, MATT
The evolutionary macroecology of exotic host use by Lepidoptera
- 10:45 009002 KAJITA, YUKIE* - O'NEILL, ERIC - ZHENG, YANBING - OBRYCKI, JOHN - WEISROCK, DAVID
The molecular signature of human introduction efforts in an invasive lady beetle
- 11:00 009003 LOCKWOOD, BRENT* - SOMERO, GEORGE
Temperature adaptation of orthologous enzymes correlates with biogeographic distributions of invasive vs. native marine mussels (genus *Mytilus*) on the California coast
- 11:15 009004 PEASE, KATHERINE* - WAYNE, ROBERT
A novel predator drives evolutionary change in prey: the response of a native tadpole to an invasive crayfish
- 11:30 009005 PORTER, STEPHANIE
Adaptive divergence in native and invasive rhizobial mutualists across serpentine soil boundaries
- 11:45 009006 AXEN, HEATHER* - GOTZEK, DIETRICH - SHOEMAKER, DEWAYNE - HELMS CAHAN, SARA
Genetic variation and structure in native and introduced populations of the fire ant *Solenopsis geminata*

10:30 AM - 11:45 AM 010 Contributed Papers**University A*****Coevolution/Adaptation -- Chair: Ashlee Rowe***

- 10:30 010001 ROWE, ASHLEE* - ROWE, MATTHEW - ZAKON, HAROLD
Evolution of resistance to bark scorpion pain-inducing toxins in predatory grasshopper mice: a tale of two deserts
- 10:45 010002 STOKES, AMBER* - GALL, B. G. - FRENCH, SUSANNAH - SCHLEPPHORST, ELIZABETH - BRODIE, E. D., JR.
Tetrodotoxin levels in larval and metamorphosed newts (*Taricha granulosa*) and palatability to predatory dragonflies
- 11:00 010003 RUSSELL, JACOB* - HU, YI - MOREAU, CORRIE
Microbial menageries of ants

- 11:15 010004 PHILLIPS, SEMOYA* - DUDA, THOMAS
At the interface of species interactions: Evolution of voltage gated sodium channels of polychaetes; targets of *Conus* venoms
- 11:30 010005 LEE, CAROLEUNMI
Pumping Ions: Evolution of ionic regulation during habitat invasions

10:30 AM - 12:00 PM 011 Contributed Papers **Oklahoma A**
Diversification - Plants II -- Chair: Michael Donoghue

- 10:30 011001 LO, EUGENIA - STOURNARAS, KALLIOPE E. - SCHAEFER, H. MARTIN - OLIVER, JEFFREY - EDWARDS, ERIKA - DONOGHUE, MICHAEL*
A possible global pattern in the distribution of fruit colors
- 10:45 011002 ESERMAN, LAUREN* - MILLER, RICHARD
Gene trees and species trees: lessons from morning glories
- 11:00 011003 CHRISTIN, PASCAL-ANTOINE* - EDWARDS, ERIKA - OSBORNE, COLIN
Adaptation of C4 photosynthesis through recurrent lateral gene transfers
- 11:15 011004 PILLON, YOHAN* - JOHANSEN, JENNIFER - SAKISHIMA, TOMOKO - CHAMALA, SRIKAR - BARBAZUK, BRAD - STACY, ELIZABETH
Evolution of the genera *Clermontia* (Campanulaceae) and *Cyrtandra* (Gesneriaceae) in Hawai'i inferred from next generation sequencing
- 11:30 011005 FISHER, AMANDA* - CLARK, LYNN - KELCHNER, SCOT
Plant radiations in the Andes: An example from the bamboos (Poaceae: Bambusoideae: Bambuseae)
- 11:45 011006 NDIRIBE, CHARLOTTE* - ANTONELLI, SILVIA - POTTIER, JULIEN - PELLISSIER, LOIC - DUBUIS, ANNE - VITTOZ, PASCAL - SALAMIN, NICOLAS - GUISAN, ANTOINE
Phylogenetic community structure and trait conservatism of alpine angiosperms

10:30 AM - 12:00 PM 012 Contributed Papers **Oklahoma B**
Phenotypic Plasticity -- Chair: Matthew Dugas

- 10:30 012001 DUGAS, MATTHEW* - FRANSSSEN, NATHAN
Nuptial coloration of red shiners is more intense in turbid habitats
- 10:45 012002 SCORDATO, ELIZABETH* - BONTRAGER, ALEXA - PRICE, TREVOR
Variable effects of climate change on expression of a sexually selected trait in Hume's warbler (*Phylloscopus humei*)
- 11:00 012003 REARICK, JOLENE
Trait correlation, ancestral trait reconstruction and evolution of freeze tolerance in frogs

- 11:15 012004 ROFF,DEREK* - FAIRBAIRN, DAPHNE
Path analysis of the genetic integration of traits in a sex-specific trade-off: a novel use of BLUPS
- 11:30 012005 CHAMBERLAIN, NICOLA* - HSU, JEREMY - KRONFORST, MARCUS
Examining the genetic basis of migratory behavior in monarch butterflies
- 11:45 012006 HUNT, BRENDAN* - OMETTO, LINO - WURM, YANNICK - SHOEMAKER, DEWAYNE -
YI, SOOJIN - KELLER, LAURENT - GOODISMAN, MICHAEL
Relaxed selection is a precursor to the evolution of phenotypic plasticity

10:30 AM - 12:00 PM 013 Contributed Papers
Molecular Evolution II -- Chair: Etsuko N. Moriyama

Oklahoma C

- 10:30 013001 MORIYAMA, ETSUKO N.* - OPIYO, STEPHEN - PARDY, ROSEVELT - MORIYAMA,
HIDEAKI
Evolution of the Kdo2-lipid A biosynthesis in bacteria
- 10:45 013002 PARK, CHUNGOO* - ZHANG, JIANZHI
High expression hampers horizontal gene transfer
- 11:00 013003 OSTMAN, BJØRN* - WILLIAMS, BARRY - SCHMIDT, THOMAS
Applying evolutionary metagenomics to greenhouse gas-emitting microbial communities
- 11:15 013004 DESMARAIS, DAVID
Functional consequences of natural variation in a plant hormone signaling network
- 11:30 013005 CHANG, DAN* - DUDA, THOMAS
Extensive and continuous gene duplication contributes to rapid evolution and diversification of
gene families
- 11:45 013006 McGAUGH, SUZANNE* - SMUKOWSKI, CAITI - MANZANO-WINKLER, BRENDA -
NOOR, MOHAMED
Association of within species diversity and between species divergence to fine-scale
recombination rate in *Drosophila pseudoobscura*

10:30 AM - 12:00 PM 014 Contributed Papers
Genomes - Phylogenetic Markers -- Chair: Davide Pisani

Oklahoma D

- 10:30 014001 PISANI, DAVIDE* - CAMPBELL, LAHCEN - ROTA-STABELLI, OMAR - MARCHIORO,
TREVOR - LONGHORN, STUART - TELFORD, MAX - PHILIPPE, HERVE' - EDGEcombe,
GREGORY - REBECCHI, LORENA - PETERSON, KEVIN
MicroRNA and phylogenomics congruently resolve the phylogenetic relationships of the Tardi-
grada within Ecdysozoa

- 10:45 014002 TARVER, JAMES E* - PISANI, DAVIDE - DONOGHUE, PHILLIP - PETERSON, KEVIN
The utility of microRNAs in phylogenetic reconstructions: Re-rooting the mammalian Tree of Life
- 11:00 014003 SANDERS, STEVEN* - CARTWRIGHT, PAULYN
A multiple marker approach using rRNA secondary structure to reconstruct Siphonophora (Cnidaria: Hydrozoa) phylogeny
- 11:15 014004 HUDSON, COREY* - PUCKETT, EMILY - BEKAERT, MICHAËL - PIRES, J. CHRIS - CONANT, GAVIN
Selection for higher gene copy number is active after different types of plant gene duplications
- 11:30 014005 DEEPAK, AKSHAY - FERNÁNDEZ-BACA, DAVID* - MCMAHON, MICHELLE - SANDERSON, MICHAEL
SearchTree: Mining phylogenetic tree databases for comparative biology
- 11:45 014006 FRANDSEN, PAUL* - KJER, KARL
Expanding the utility of DNA barcoding for use in phylogenetics: a case study with *Leptonema*

12:00 PM - 1:30 PM L0 Special Lecture**Oklahoma E***Stephen J. Gould Award Lecture -- Chair: Scott Edwards*

- 12:00 L0001 MILLER, KENNETH R.
So Simple a Beginning - Why Evolution Matters in America Today

1:50 PM - 5:00 PM Sym2 Symposium**Oklahoma E***SSE Symposium: Adaptation -- Chair: H. Allen Orr*

- 1:50 Sym27001 ORR, H. ALLEN
Introduction to adaptation symposium
- 2:00 Sym27002 ANDOLFATTO, PETER
Negative selection, positive selection and epistatic interactions govern protein evolution in *Drosophila*
- 2:30 Sym27003 HOEKSTRA, HOPI
From mice to molecules to mutations: Adaptation in the Nebraska Sandhills
- 3:00 Break
- 3:30 Sym27005 SCHLUTER, DOLPH* - ROGERS, SEAN - KINGSLEY, DAVID
Genetic signature of adaptive peak shift in stickleback

4:00 Sym27006 WEINREICH, DANIEL* - SINDI, SUZANNE - WATSON, RICHARD
Modeling evolutionary trajectories in polymorphic populations: Beyond sequence space
but whither the predictive landscape?

4:30 Sym27007 WICHMAN, HOLLY
Dissecting adaptive evolution in a virus

1:45 PM - 3:00 PM 016 Contributed Papers University B
Behavior II -- Chair: Matthew Wund

- 1:45 016001 WUND, MATTHEW
Evolution of antipredator behavior in Alaskan threespine stickleback fish
- 2:00 016002 COTHRAN, RICKEY* - CHAPMAN, KRISTOPHER - ANDY, STIFF - RELYEA, RICK
“Cryptic” direct benefits of mate choice: choosy females experience less sexual harassment and
reduced predation risk, but receive no indirect genetic benefits
- 2:15 016003 IGLESIAS, TERESA* - PATRICELLI, GAIL - MCELREATH, RICHARD
Western Scrub-Jay funerals: Cacophonous aggregations in response to dead conspecifics
- 2:30 016004 D’ORAZIO, ANTHONY E.* - DALY, MARYMEGAN
Survival in the intertidal: the use of different strategies in inter-clonal contests by the sea anemo-
ne *Anthopleura elegantissima*
- 2:45 016005 BURLS, KEVIN* - FORISTER, MATT
Ecological consequences of intraspecific genetic diversity in the seed beetle *Callosobruchus*
maculatus

1:45 PM - 3:00 PM 021 Contributed Papers Oklahoma D
Genome Evolution -- Chair: Jennifer Modliszewski

- 1:45 021001 MODLISZEWSKI, JENNIFER
Evolution post-polyploidization: What can be learned from the whole genome sequence of a
natural allotetraploid *Mimulus*
- 2:00 021002 JUE, NATHANIEL* - LINDSAY, JAMES - OBERGFELL, CRAIG - O’NEILL, RACHEL
Genomics and transcriptomics of an ancient species, the Atlantic horseshoe crab, *Limulus*
polyphemus
- 2:15 021003 ARROYO, JOSE - HOFFMANN, FEDERICO - OPAZO, JUAN*
Gene turnover and differential retention in the relaxin/insulin-like gene family in primates
- 2:30 021004 CHUN, SUNG* - FAY, JUSTIN
Hitchhiking regions are enriched with deleterious mutations within the human genome
- 2:45 021005 SCHURKO, ANDREW - HANSON, SARA - MARK WELCH, DAVID - LOGSDON, JOHN*
Molecular evolution of meiotic genes in sexual and asexual rotifers

2:00 PM - 3:00 PM 015 Contributed Papers University C
Aging I -- Chair: Joanna Joyner-Matos

- 2:00 015001 JOYNER-MATOS,J.* -BEAN,L.C. -RICHARDSON,H. -SAMMELL,T. -BAER,C.F.
The apparent lack of influence of elevated free radical levels on the mutational process in
C. elegans
- 2:15 015002 TSUNEKAGE, T.* -RICKLEFS, R.E.
A comparative study of oxidative damage in avian embryos
- 2:30 015003 CHEN, HWEI-YEN* -MAKLAKOV, ALEXEI
High mortality leads to slower aging
- 2:45 015004 BERG, ELENA* -MAKLAKOV, ALEXEI
Intralocus sexual conflict over lifespan and aging in the seed beetle

2:00 PM - 3:00 PM 017 Contributed Papers University A
Community Dynamics -- Chair: Eric Waltari

- 2:00 017001 WALTARI, ERIC* -VANDERWAL, JEREMY -CARNAVAL, ANA
Evaluation of species and PCA-delimited biome distribution models in the Brazilian Atlantic
Forest from the LGM to present
- 2:15 017002 WALSH, MATTHEW* -POST, DAVID
A cascade of evolution alters ecosystem function
- 2:30 017003 PIE, MARCIO
A phylogenetic perspective on the evolution of ecological dominance in ants
- 2:45 017004 DING, BAOQING* -CUROLE, JASON -HUSEMANN, MARTIN -DANLEY, PATRICK
Species richness and community predictability of mbuna cichlids in Lake Malawi

2:00 PM - 3:00 PM 018 Contributed Papers Oklahoma A
Diversification - Herps I -- Chair: Charles Linkem

- 2:00 018001 LINKEM, CHARLES
Species tree despite gene-tree incongruence in a large data set: The phylogeny of the
Sphenomorphus group (Squamata:Scincidae)
- 2:15 018002 SINGHAL, SONAL
Resolving patterns of genealogical discordance in a rainforest lizard
- 2:30 018003 RABOSKY, DANIEL* -COWAN, MARK -LOVETTE, IRBY
Ecological diversification and niche evolution in the world's most species-rich lizard
community

2:45 018004 DAVIS,ALISON* - COX,CHRISTIAN - McGUIRE,JIMMY
Color polymorphism and the evolution of snake mimicry systems

2:00 PM - 3:00 PM 019 Contributed Papers Oklahoma B
Diversification - Plants III/Fungi -- Chair: James Pettengill

2:00 019001 PETTENGILL,JAMES* - MOELLER,DAVID
Tempo and mode of mating system evolution between incipient *Clarkia* species

2:15 019002 DIMITAR,DIMITROV* - DAVID,NOGUÉS-BRAVO - NIKOLAJ,SCHARFF
A plant against the elements: past, present and future of the African violets (*Saintpaulia*)

2:30 019003 KOSTIKOVA,ANNA* - PEARMAN,PETER - SALAMIN,NICOLAS
Adaptive evolution and convergence to climate in Eriogonoideae clade, Polygonaceae family

2:45 019004 ANDERSON,CL.* - HARRIS,S.D. - MORIYAMA,ETSUKO
The Fungal Genome Collection: a comparative database for fungal genomes

2:00 PM - 3:00 PM 020 Contributed Papers Oklahoma C
Reinforcement -- Chair: Roman Yukilevich

2:00 020001 YUKILEVICH,ROMAN
A new pattern of speciation among *Drosophila* appears to uniquely support reinforcement

2:15 020002 MATUTE,DANIEL
The cost of reinforcement in *Drosophila yakuba*

2:30 020003 HOPKINS,ROBIN* - RAUSHER,MARK
Reinforcement and other selection forces causing reproductive character displacement in the native Texas wildflower *Phlox drummondii*

2:45 020004 JOHNSON,MELISSA* - STACY,ELIZABETH
Long distance makes it easy to drift apart: the roles of allopatry and reinforcement in the evolution of reproductive barriers within Hawaiian *Cyrtandra* (Gesneriaceae)

3:30 PM - 5:00 PM 025 Contributed Papers Oklahoma A
Phylogenetic Methods I -- Chair: Michael Rosenberg

3:30 025001 ROSENBERG,MICHAEL
Extending gene family identification through phylogenetics

3:45 025002 HIRD,SARAH* - BRUMFIELD,ROBB - CARSTENS,BRYAN
Creating and using a provisional-reference genome from anonymous next-gen reads using PRGmatic

- 4:00 025003 PETERSON, B.P.* - WEBER, J.N. - KAY, E.H. - FISHER, H.S. - HOEKSTRA, HOPI
Double digest RADseq: an inexpensive, reference-free method for *de novo* discovery and genotyping of 102 - 106 SNPs for model and non-model species
- 4:15 025004 ANE, CECILE* - HO, LAM
What power do comparative methods have to detect shifts in trait evolution and can we consistently estimate their parameters?
- 4:30 025005 ADAMS, DEAN
A phylogenetic evolutionary rate for shape and other multi-dimensional traits
- 4:45 025006 DENTON, JOHN
Modularity of form in the nominal lanternfish genus *Myctophum* (Scopelomorpha; Myctophidae)

3:30 PM - 5:00 PM 022 Contributed Papers
Aging/Longevity -- Chair: Jeff Leips

University C

- 3:30 022001 LEIPS, JEFF
The genetic basis of phenotypic variation changes with age: implications from whole genome analyses in *Drosophila*
- 3:45 022002 DUDYCHA, JEFFRY* - NI, PEILAN
Evolution of aging-related pathways in the crustacean *Daphnia*
- 4:00 022003 PARMENTER, MICHELLE* - CRIST, ANNA - PHILLIPS, PATRICK
Worm population cages: using soil microcosms to elucidate longevity patterns in aging mutants in *Caenorhabditis elegans*
- 4:15 022004 PHILLIPS, PATRICK* - JOVELIN, RICHARD - COMSTOCK, JENNIFER - REYNOLDS, ROSE
Natural variation in longevity and a recent selective sweep in the insulin-like signaling pathway in nematodes
- 4:30 022005 CASOLA, CLAUDIO* - ZEKONYTE, UGNE - PHILLIPS, ANDREW - COOPER, DAVID - HAHN, MATTHEW
Interlocus gene conversion events introduce deleterious mutations in at least 1% of human genes associated with inherited disease
- 4:45 022006 BEKAERT, MICHAËL* - CONANT, GAVIN C
Gene duplication and loss in mammalian metabolic networks is associated with changes in longevity and body temperature

3:30 PM - 5:00 PM 023 Contributed Papers
Education -- Chair: Mohamed Noor

University B

- 3:30 023001 SMUKOWSKI, CAITLIN - MANZANO WINKLER, BRENDA - HUNTER, MIKA - NOOR, JULIET - NOOR, MOHAMED*
Witnessing evolution first-hand: K-12 and college laboratory exercises in genetics and evolution using *Drosophila*
- 3:45 023002 HA, MINSU* - NEHM, ROSS H. - MAYFIELD, ELIJAH
Transforming biology assessment with machine learning: automated scoring of written evolutionary explanations
- 4:00 023003 HERRON, JON* - ABRAHAM, JOEL - MARUCA, SUSAN - MEIR, ELI
Helping students connect Mendelian genetics and population genetics: Field test of a virtual lab exercise
- 4:15 023004 NOOR, JULIET* - NOOR, MOHAMED
Inquiry-based molecular evolution laboratory exercise for college courses: Whither art thou selection?
- 4:30 023005 ROWE, MATTHEW* - GILLESPIE, MARCUS - ROSE, LORIA. - SHANNON, LI-JEN - PRIMM, TODD - CASO, RITA
Surprise, surprise: teaching critical thinking improves students' acceptance of evolution
- 4:45 023006 RICE, JUSTIN* - COLBERT, JAMES
Understanding and acceptance of evolution and the nature of science: A study of university faculty

3:30 PM - 5:00 PM 024 Contributed Papers
Conservation -- Chair: Meredith Mahoney

University A

- 3:30 024001 MAHONEY, MEREDITH
Population genetics of the endangered Hine's emerald dragonfly (*Somatochlora hineana*, Corduliidae)
- 3:45 024002 UY, KAREN LIZEL* - PRICE, DONALD
Adaptation potential of Hawaiian picture-wing *Drosophila*: indicator species for climate change
- 4:00 024003 PINSKY, MALIN* - PALUMBI, STEPHEN
Widespread genetic effects of overfishing
- 4:15 024004 WARD, R.* - BUSCH, D. - LELLIS, W.
The fate of the blue pike (*Sander* sp.) in Lake Erie
- 4:30 024005 DRIES, LAURIE
Why evolution matters in endangered species management: the case of *Eurycea sosorum*, the Barton Springs salamander

- 4:45 024006 RIVERS, MALIN* - BRUMMITT, NEIL - NIC LUGHADHA, EIMEAR - MEAGHER, THOMAS
Do Red List conservation assessments capture evolutionary potential?

3:30 PM - 5:00 PM 026 Contributed Papers Oklahoma B
Diversification - Nonvertebrates -- Chair: Vincent Smith

- 3:30 026001 STEFKA, JAN - SMITH, VINCENT*
A hitchhikers guide to the Galapagos: co-phylogeography of Galapagos mockingbirds and their parasites
- 3:45 026002 SATLER, JORDAN* - HEDIN, MARSHAL
Multigenic species delimitation and species tree inference in a complex of California trapdoor spiders (Mygalomorphae, Antrodiaetidae, *Aliatypus*)
- 4:00 026003 MATHUR, VINAYAK* - SCHMIDT, PAUL
Elevating fruit flies: the impact of altitudinal variation in African populations of *Drosophila melanogaster*
- 4:15 026004 PRINGLE, ELIZABETH* - DIRZO, RODOLFO - GORDON, DEBORAH
Phylogeography of symbiotic plant-ants and the evolution of ant colony traits
- 4:30 026005 VAN DAM, ALEX* - MAY, BERNIE
Delimiting host specific genetic lineages embedded within morphological species of *Dactylopius* using molecular phylogenetics
- 4:45 026006 SIMPSON, CARL
Reef coral diversification: inferences from the molecular and fossil records

3:30 PM - 5:00 PM 027 Contributed Papers Oklahoma C
Prezygotic Isolation -- Chair: Christopher Ellison

- 3:30 027001 ELLISON, CHRISTOPHER* - WILEY, CHRIS - SHAW, KERRY
Simple genetic architecture underlying sexual isolation in the Hawaiian cricket genus *Laupala*
- 3:45 027002 AHMED, YASIR
The genetics of postmating, prezygotic reproductive isolation between *Drosophila americana* and its relatives.
- 4:00 027003 McNABNEY, DANIEL
The genetic basis of behavioral isolation in *Drosophila*
- 4:15 027004 HENNING, FEDERICO* - MEYER, AXEL
Pleiotropy and the origin of species: Genetic mapping of an assortative mating gene in the Midas cichlid

- 4:30 027005 BRADSHAW, TOBY - YUAN, YAO-WU*
A single nucleotide substitution in a flower color locus contributes to pollinator shift in monkeyflowers
- 4:45 027006 KAY, EMILY
Behavioral and genomic evidence of sexual isolation between sister species of *Peromyscus*

3:30 PM - 5:00 PM 028 Contributed Papers Oklahoma D
Genomics II -- Chair: Ryan N. Gutenkunst

- 3:30 028001 MA, XIN - KELLEY, JOANNA - BOYKO, ADAM - BUSTAMANTE, CARLOS - GUTENKUNST, RYAN*
Population genomic inferences of natural history and selection in orangutans
- 3:45 028002 BACKSTROM, NICLAS* - EDWARDS, SCOTT - HILL, GEOFF
Towards a draft genome of the house finch (*Carpodacus mexicanus*), a model species for sexual selection and host-pathogen interactions
- 4:00 028003 FALLIS, LINDSEY* - CLOWERS, KATIE - SCHULER, KENDRA - MORGAN, THEODORE
The genetic basis of thermotolerance phenotypes in *Drosophila melanogaster*
- 4:15 028004 MCGAUGH, SUZANNE - SMUKOWSKI, CAITLIN* - MANZANO-WINKLER, BRENDA - NOOR, MOHAMED
Conservation and divergence of recombination rate in *Drosophila miranda* and its close relatives
- 4:30 028005 COMERON, JOSEP* - RATNAPPAN, RAMESH - BAILIN, SAMUEL
Variation in recombination rates in *Drosophila melanogaster*
- 4:45 028006 RAMÍREZ, SANTIAGO* - TSUTSUI, NEIL
Population genomics and pathogen loads of honey bees in North America

5:15 PM - 6:15 PM L3 Special Lecture Oklahoma E
SSB Presidential Address

- 5:15 L3001 CRANDALL, KEITHA.
The next generation of systematic biology

SUNDAY, JUNE 19

8:30 AM - 10:00 AM 029 Contributed Papers University C
Phenotypic Plasticity III -- Chair: Emilie Snell-Rood

- 8:30 029001 SNELL-ROOD, EMILIE* - TROTH, ASHLEY - MOCZEK, ARMIN
The epigenetics of phenotypic plasticity: methylation and nutritional variation in horned beetles
- 8:45 029002 MIEHLS, ANDREA* - MCADAM, ANDREW - PEACOR, SCOTT
Phenotypically plastic response of an invasive species to temperature but not a predator
- 9:00 029003 MCNUTT, DAVID* - UNDERWOOD, NORA
Potential genetic constraints on the evolution of defensive plasticity of *Solanum carolinense* to multiple herbivores
- 9:15 029004 TELEMECO, RORY* - RADDER, RAJKUMAR - BAIRD, TROY - SHINE, RICHARD
Thermal effects on reptile reproduction: Adaptation and phenotypic plasticity in a montane lizard
- 9:30 029005 GRAHAM, JOHN* - POE, AMY - TARPLEY, LAUREN - LANNING, STEVEN
RNAi silencing of neuropeptides increases fluctuating asymmetry of sensory bristles in *Drosophila melanogaster*
- 9:45 029006 DRAGHI, JEREMY - WHITLOCK, MICHAEL*
Phenotypic plasticity can increase genetic variance and create genetic and mutational correlations

8:30 AM - 10:00 AM 030 Contributed Papers University B
Gene Flow I -- Chair: H. Bradley Shaffer

- 8:30 030001 SHAFFER, H. BRADLEY* - WANG, IAN
High consistency of landscape genetic inferences across space and time in the endangered California tiger salamander
- 8:45 030002 COTRONEO, LAURIE* - SPOTILA, JAMES
Conservation genetics of the American crocodile, *Crocodylus acutus*, on the Pacific coast of Costa Rica
- 9:00 030003 DRISCOLL, CATHERINE
A population genetic analysis of bighorn sheep in Rocky Mountain National Park
- 9:15 030004 PLATT, ALEXANDER
What *Arabidopsis thaliana* been up to since the glaciers retreated
- 9:30 030005 JOHNSON, JEFF* - BURNHAM, KURT
Adaptive significance of plumage color in gyrfalcon
- 9:45 030006 FARRINGTON, HEATHER - PETREN, KENNETH*
A century of genetic change and metapopulation dynamics in the Galápagos warbler finches

8:30 AM - 10:00 AM 031 Contributed Papers
Population Genetics -- Chair: Alan Rogers

University A

- 8:30 031001 ROGERS,ALAN
Ka/Ks ratio predicts time-dependent estimates of evolutionary rate
- 8:45 031002 ORIVE,MARIAE.* -WAKELEY,JOHN
A new population genetic model of host-endosymbiont dynamics
- 9:00 031003 BRANDVAIN,YANIV* -COOP,GRAHAM
Driving heterochiasmy: Meiotic drive and sex differences in recombination
- 9:15 031004 WOLAK,MATTHEW* -FAIRBAIRN,DAPHNE
Quantifying the genetic architecture of sexually dimorphic traits from population line crosses of the water strider, *Aquarius remigis*
- 9:30 031005 HAMMERLY,SUSAN* -JOHNSON,JEFF
Evaluation of inbreeding and potential fitness consequences in the captive breeding population of Attwater's Prairie-chicken
- 9:45 031006 LONG,HONGAN* -ZUFALL,REBECCA
Mutation accumulation in germline and somatic genomes within one cell

8:30 AM - 10:00 AM 032 Contributed Papers
Phylogenetic Methods II - Species Delimitation -- Chair: Danielle Edwards

Oklahoma A

- 8:30 032001 EDWARDS,DANIELLE* -KNOWLES,L.LACEY
Integrative approaches to assignment in species delimitation: Is DNA enough?
- 8:45 032002 FAN,HELEN* -KUBATKO,LAURA
Estimating species trees using approximate Bayesian computation
- 9:00 032003 LANIER,HAYLEY* -KNOWLES,L.LACEY
How accurate are species trees when model assumptions are violated?
- 9:15 032004 REID,NOAH* -CARSTENS,BRYAN
A Bayesian implementation of the mixed yule-coalescent model for species delimitation
- 9:30 032005 HOVMOLLER,RASMUS* -TRESSEDER,TRAVIS
Effects of missing data on species tree estimation from gene trees under the coalescent
- 9:45 032006 MATEOS,MARIANA* -HURTADO,LUIS
Comparison of Bayesian species trees methods with an empirical dataset: hydrothermal vent crabs (family Bythograeidae)

8:30 AM - 10:00 AM 033 Contributed Papers
Diversification - Arthropods I -- Chair: Isaac Winkler

Oklahoma B

- 8:30 033001 WINKLER, ISAAC* - WIEGMANN, BRIAN
Dancing queens: Female ornamentation and evolution of dance flies (Diptera: Empididae)
- 8:45 033002 FREDERICK-HUDSON, KATY* - SCHUL, JOHANNES
Postglacial expansion and rapid diversification of communication signals
- 9:00 033003 WEEKS, STEPHEN* - BRANTNER, JUSTIN - OTT, DONALD - CALABRESE, ALISSA
Repeated evolution of hermaphroditism from dioecy in branchiopod crustaceans
- 9:15 033004 WARD, LAUREN* - WHARTON, ROBERT - DEWITT, THOMAS
Bellopius (Braconidae) parasitoids of fruit-infesting Tephritidae (Diptera)
- 9:30 033005 LOPEZ-URIBE, MARGARITA
Assessing the impact of paleogeological and paleoclimatic changes on neotropical pollinators: comparative multi-locus phylogeography of three orchid bee species
- 9:45 033006 DUENNES, MICHELLE* - LOZIER, JEFFREY - CAMERON, SYDNEY
Complex divergence patterns in a Mesoamerican bumble bee (Hymenoptera: Apidae: *Bombus*)

8:30 AM - 10:00 AM 034 Contributed Papers
Genomics III -- Chair: Nick Goldman

Oklahoma C

- 8:30 034001 LOYTYNOJA, ARI - TAYLOR, MARTIN - GOLDMAN, NICK*
Strand-switch mutations as a driver of genome evolution
- 8:45 034002 HE, QIXIN* - KNOWLES, L. LACEY
Utility of next-generation sequencing for phylogenomic analysis of diverse non-model taxa
- 9:00 034003 EO, SOO HYUNG* - HALE, MATTHEW - MARRA, NICHOLAS - DEWOODY, J. ANDREW
Estimating density of SNPs in protein-coding and non-coding transcripts using next-generation sequencing
- 9:15 034004 PRAMOD, SREEPRIYA* - WELCH, MARK
Microsatellites from the untranslated regions (UTRs) of the *Helianthus annuus* transcriptome play a role in modulating phenotypes?
- 9:30 034005 MORRISON, GINNIE DENISE* - LINDER, C. RANDAL
Genome-wide association study for germination under different light and nutrient conditions in *Arabidopsis thaliana*
- 9:45 034006 PELC, SANDRA* - LINDER, C. RANDAL
A genome-wide association study in wild *Arabidopsis thaliana* accessions to determine the chromosomal regions underlying the adaptive evolution of seed oils

8:30 AM - 5:00 PM Sym3 Symposium

Oklahoma E

SSE Symposium. Evolutionary Medicine Symposium in Honor of George C. Williams -- Chairs: Michael Antolin; Kristin Jenkins

- 8:30 Sym34001 MEAGHER, THOMAS -ANTOLIN, MICHAEL*
Welcome and Introduction - Evolutionary Medicine Symposium
- 9:00 Sym34002 NESSE, RANDOLPH
What evolutionary biology and medicine offer to each other, and reflections on George Williams
- 9:30 Sym34003 HANCOCK, ANGELA
Adaptation to the Environment and Disease Risk
- 10:00 Break
- 10:30 Sym34005 CRESPI, BERNARD
Evolutionary-genomic conflict and cooperation in human health and disease
- 11:00 Sym34006 OMENN, GIL
Evolution and public health
- 11:30 Sym34007 MORENO, ANDRES
Human genome-wide variation and association studies
- 12:00 Lunch
- 1:30 Sym34008 STEARNS, STEPHEN
Evolution of aging
- 2:00 Sym34009 HANLEY, KATHY
The taming of the flu: How evolution enables and undermines live-attenuated vaccines
- 2:30 Sym34010 WIRTH, DYANN
From genes to genomes: genetic diversity in malaria, implications for biology and pathogenesis
- 3:00 Break
- 3:30 Sym34012 DE, SUBHAJYOTI
Structural and epigenetic determinants of cancer genome evolution
- 4:00 Sym34013 BERGSTROM, CARL
The value of mathematical models in controlling disease evolution
- 4:30 Sym34014 ECKSTRAND, IRENE
Summary and future outlook at the interface between medicine and evolution

8:45 AM - 10:00 AM 099 Contributed Papers
Sexual Selection - Sperm -- Chair: Rosemary Knapp

Oklahoma D

- 8:45 099001 RANSLER, FA.* - IACOVELLI, S. - BOGDANOWICZ, S.M. - ADKINS-REGAN, E.K. - HARRISON, R.G.
Investigating the molecular evolution of a unique reproductive proteome in quail and its role in sperm competition
- 9:00 099002 FISHER, HEIDI* - HOEKSTRA, HOPI
Alliance and antagonism: Uncovering the mechanisms driving sperm competition in deer mice
- 9:15 099003 MODANU, MARIA* - MICHALIK, PETER - ANDRADE, MAYDIANNE C. B.
Mating system does not predict functionality of testes in *Latrodectus* spiders
- 9:30 099004 SOUTH, ADAM* - STANGER-HALL, KATHRIN - JENG, MING-LUEN - LEWIS, SARA
Correlated evolution of female neoteny and flightlessness with male spermatophore production in fireflies (Coleoptera:Lampyridae)
- 9:45 099005 ZEH, JEANNE - BONILLA, MELVIN* - ZEH, DAVID
From father to son: transgenerational effects of tetracycline treatment on sperm viability

10:30 AM - 12:00 PM 035 Contributed Papers
Polymorphisms -- Chair: Rosemary Knapp

University C

- 10:30 035001 STIVER, KELLY* - MARSH-ROLLO, SUSAN - TOWNSEND, JEFFREY - HOFMANN, HANS - ALONZO, SUZANNE
Male alternative tactics, gene-expression variation, and the potential fitness consequences of AVT-manipulation in the ocellated wrasse (*Symphodus ocellatus*)
- 10:45 035002 EMLÉN, DOUGLAS* - JOHNS, ANNIKA - WARREN, IAN - CORLEY-LAVINE, LAURA
Insulin signaling is a mechanism for exaggerated growth and conditional expression of a weapon of sexual selection
- 11:00 035003 MITRA, CHANDREYEE* - WAGNER, WILLIAM JR. - ZERA, ANTHONY
Males and females in a flight polyphenic field cricket express alternative reproductive tactics
- 11:15 035004 AJURIA-IBARRA, HELENA* - READER, TOM
The effect of learning behaviour in the honey bee on the maintenance of the colour polymorphism in the crab spider *Synema globosum*
- 11:30 035005 GERING, EBEN
Causes of female color polymorphism in an invasive Hawaiian damselfly

10:30 AM - 12:00 PM 036 Contributed Papers
Hybridization & Introgression -- Chair: EL Larson

University B

- 10:30 036001 LARSON, E.L.* - ANDRES, J.A. - BOGDANOWICZ, S.M. - HARRISON, R.G.
Candidate speciation genes revealed through high-throughput SNP genotyping in a field cricket hybrid zone
- 10:45 036002 WADE, ELIZABETH* - SIMON, CHRIS
Widespread nuclear and mtDNA introgression across a narrow contact zone in two species of New Zealand cicadas
- 11:00 036003 PHILLIPS, BARRET* - EDMANDS, SUZANNE
Long-term consequences of hybridization on copepod genome composition
- 11:15 036004 KUNTE, KRUSHNAMEGH* - SHEA, CRISTINA - AARDEMA, MATTHEW - SCRIBER, J. MARK - JUENGER, THOMAS - GILBERT, LAWRENCE - KRONFORST, MARCUS
Sex chromosome mosaicism and hybrid speciation among tiger swallowtail butterflies
- 11:30 036005 BOSSU, CHRISTEN* - NEAR, THOMAS
Do postmating barriers explain patterns of hybridization between orangethroat darters and rainbow darters?
- 11:45 036006 TAYLOR, SCOTT* - FRIESEN, VICKI
Evidence for speciation with gene flow: an examination of the evolutionary genetics of Blue-footed and Peruvian Boobies

10:30 AM - 12:00 PM 037 Contributed Papers
Inbreeding -- Chair: Charles Criscione

University A

- 10:30 037001 CRISCIONE, CHARLES* - VILAS, ROMAN - PANIAGUA, ESPERANZA - BLOUIN, MICHAEL
More than meets the eye: cryptic microgeographic genetic structure in a parasite explains extensive variation in population inbreeding coefficients
- 10:45 037002 OWEN, ROBIN* - NICKLE, TODD
The proportion of diploid males and the number of sex alleles maintained in subdivided populations of Hymenoptera
- 11:00 037003 TAFT, HEATHER* - ROFF, DEREK
Do bottlenecks increase additive genetic variance?
- 11:15 037004 NUNNEY, LEONARD* - ENDERS, LARAMY
Can simple hypotheses predict the detrimental fitness interaction of stress and inbreeding depression?

- 11:30 037005 KARDOS, MARTY* - LUIKART, GORDON - ALLENDORF, FRED
Should we use pedigrees to detect inbreeding depression when the founders might be related?
- 11:45 037006 ENDERS, LARAMY* - NUNNEY, LEONARD
Does a general linear relationship exist for seasonal stress and inbreeding depression in captive field populations of *Drosophila melanogaster*?

10:30 AM - 12:00 PM 038 Contributed Papers **Oklahoma A**
Phylogenetic Methods III -- Chair: Alexandros Stamatakis

- 10:30 038001 STAMATAKIS, ALEXANDROS
What's new in RAxML?
- 10:45 038002 CROSBY, RALPH* - WILLIAMS, TIFFANIL
Fast evolutionary tree distance computation using quartets
- 11:00 038003 LINDER, C. RANDAL* - LIU, KEVIN - WARNOW, TANDY - HOLDER, MARK -
STAMATAKIS, ALEXANDROS
SATé-II: a faster and more accurate algorithm for simultaneous alignment and phylogenetic inference
- 11:15 038004 ZWICKL, DERRICK* - HOLDER, MARK
A simple insertion-deletion mixture model for phylogenetic inference
- 11:30 038005 MATTHEWS, SUZANNE* - WILLIAMS, TIFFANI
An efficient and extensible approach for compressing phylogenetic trees
- 11:45 038006 FELSENSTEIN, JOE
Simulation tests of integrating fossils into a molecular tree using quantitative characters

10:30 AM - 12:00 PM 039 Contributed Papers **Oklahoma B**
Diversification - Arthropods II -- Chair: David H. Hembry

- 10:30 039001 HEMBRY, DAVID* - KAWAKITA, ATSUSHI - GURR, NEIL - SCHMAEDICK, MARK -
BALDWIN, BRUCE - GILLESPIE, ROSEMARY
Coadiversification of a pollinating seed-predation mutualism in Eastern Polynesia
- 10:45 039002 MARSKE, KATHARINE* - LESCHEN, RICHARD - BUCKLEY, THOMAS
Concerted versus independent evolution and the search for multiple refugia: four New Zealand beetles
- 11:00 039003 BAYLESS, KEITH* - MORITA, SHELAH - WIEGMANN, BRIAN
Patterns of diversification in the tabanine horse flies (Insecta: Diptera: Tabanidae)
- 11:15 039004 BREINHOLT, JESSE* - MOLER, PAUL - FEITZNER JR., JAMES - CRANDALL, KEITH
Dealing with cryptic species in a multigene species tree analysis of the crayfish subgenus *Leonticambarus* (Cambaridae: *Procambarus*)

- 11:30 039005 MAGNACCA, KARL* - PRICE, DONALD
Morphological convergence and rapid radiation in the evolution of Hawaiian picture-wing *Drosophila*
- 11:45 039006 PRICE, SHAUNA* - KRONAUER, DANIEL - WAYNE, ROBERT - TRAN, LUCY - POWELL, SCOTT
Patterns of diversification and historical biogeography in the speciose Neotropical ant genus *Cephalotes*

10:30 AM - 12:00 PM 040 Contributed Papers
Genomics IV -- Chair: John Novembre

Oklahoma C

- 10:30 040001 WEGMANN, DANIEL - KESSNER, DARREN - VEERAMAH, KRISHNA - MATHIAS, RASIKA - NICOLAE, DAN - YANEK, LISA - SUN, YAN - TORGERSON, DARA - RAFAELS, NICHOLAS - MOSELEY, THOMAS - BECKER, LEWIS - RUCZINSKI, INGO - BEATY, TERRI - KARDIA, SHARON - MEYERS, DEBORAH - BARNES, KATHLEEN - BECKER, DIANE - FREIMER, NELSON - NOVEMBRE, JOHN*
Recombination rates in admixed individuals revealed by ancestry-based inference
- 10:45 040002 JONES, EMILY* - PIAZZA, ANDREW - DYBDAHL, MARK
A coevolutionary model of virulence: the role of the host in generating the “curse of the Pharaoh”
- 11:00 040003 DE KONING, A. P. JASON* - CASTOE, TODD - POLLOCK, D. D.
Towards realism without over-parameterization: new approaches for modeling site-heterogeneous evolution in protein-coding genes.
- 11:15 040004 CUSIMANO, NATALIE - STADLER, TANJA - RENNER, SUSANNE*
A new approach to correcting for missing species in diversification analyses
- 11:30 040005 UYEDA, JOSEF* - HANSEN, THOMAS - ARNOLD, STEVAN - PIENAAR, JASON
Evolutionary process models can simultaneously explain micro- and macroevolutionary patterns
- 11:45 040006 SHAPIRO, JOSHUA* - GERKE, JUSTIN - ANDERSEN, ERIK - CRISSMAN, JONATHAN - FÉLIX, MARIE-ANNE - KRUGLYAK, LEONID
Chromosome-scale selective sweeps shape *Caenorhabditis elegans* genomic diversity

1:20 PM - 5:00 PM Sym4 Symposium

University C

SSB Symposium: Promises and Pitfalls of Incorporating Next-Generation Sequencing Data in Phylogeography -- Chairs: Emily Moriarty Lemmon; Alan Lemmon; Bryan Carstens

- 1:20 Sym46001 LEMMON, EMILY MORIARTY
Introduction to the promises and pitfalls of incorporating next-generation sequencing data in phylogeography
- 1:30 Sym46002 LEMMON, ALAN* - LEMMON, EMILY MORIARTY
Using RAD sequencing to uncover rapidly evolving nuclear markers for phylogeography
- 2:00 Sym46003 GOOD, JEFFREY
Leveraging methods of targeted enrichment and high-throughput sequencing for comparative population genomic studies
- 2:30 Sym46004 BRUMFIELD, ROBB
NGS data in comparative phylogeography and hybrid zonology
- 3:00 Break
- 3:30 Sym46006 DENNIS, ALICE* - DUNNING, LUKE - MYERS, SHELLEY - BUCKLEY, THOMAS
Cold tolerance in New Zealand alpine stick insects: transcriptome variation within and among species
- 4:00 Sym46007 WHITTALL, JUSTEN
New perspectives on cryptic divergence and ecological pleiotropy: from pine plastomes to Arctic mustard transcriptomes
- 4:30 Sym46008 CARSTENS, BRYAN* - ZELLMER, AMANDA
Next-generation sequencing allows identification of the timing and causes of diversification in the carnivorous plant *Sarracenia alata*

1:30 PM - 3:00 PM 041 Contributed Papers**University B*****Gene Flow II -- Chair: Jack W. Sites, Jr.***

- 1:30 041001 PERKINS,ALEX* -PHILLIPS,BENJAMIN -HASTINGS,ALAN
Contributions of life-history and dispersal evolution to spatial spread of cane toads and other
invasive species
- 1:45 041002 COX,CHRISTIAN* -DAVIS,ALISON
Using the locus-comparison approach to infer selection on color pattern polymorphism in the
ground snake, *Sonora semiannulata*
- 2:00 041003 GILBERT,LAWRENCE
Hybridization as a proximate source of novel variation in the evolution of mullerian mimicry
in *Heliconius*
- 2:15 041004 CLIMER,CYNTHIA* -GETTLER,KYLE -BURGOS,N. -LAWTON-RAUH,A.
Population genetics of weedy rice: what is driving proliferation of non-endemic red, wild rice
in the United States?
- 2:30 041005 DIXON,ANDREA* -HERLIHY,CHRISTOPHER -BUSCH,JEREMIAH
Examining populations at the range edge in an endemic annual flower
- 2:45 041006 WILDER,JASON* -WELLS,MCKENNA -JOHNSON,OLIVIA -SATYAGRAHA,
ARI - SUDOYO,HERAWATI
Genetic differentiation of human populations across a linguistic contact zone in North Maluku,
Indonesia

1:30 PM - 3:00 PM 042 Contributed Papers**University A*****Sex & Reproduction -- Chair: Xianfa Xie***

- 1:30 042001 XIE,XIANFA* -QIU,WEIGANG -LIPKE,PETER
The origin of sex and the origin of species: From yeasts to humans
- 1:45 042002 WALTERS,JAMES* -HARDCASTLE,THOMAS
Getting a full dose? Sex chromosome dosage compensation in moths and butterflies
- 2:00 042003 MARRIAGE,TARA* -ORIVE,MARIA
Asexual reproduction, mixed mating and genetic load
- 2:15 042004 PHADKE,SUJAL -ZUFALL,REBECCA*
Sex ratios and mating dynamics in a ciliate with seven sexes
- 2:30 042005 COLBY,GREGORY* -FUNK,DANIEL
Divergent patterns and causes of genetic variation in sexual versus asexual *Neochlamisus*
leaf beetles

1:30 PM - 3:00 PM 044 Contributed Papers
Molecular Evolution III -- Chair: Jeffrey Mower

Oklahoma B

- 1:30 044001 MOWER, JEFFREY* - CASE, ANDREA - FLORO, ERIC - WILLIS, JOHN
In vivo structure and genetic content of the mitochondrial genome of monkeyflower (*Mimulus guttatus* L.) with cryptic CMS
- 1:45 044002 GONZALES, ANA* - FANG, ZHOU - DURBIN, MARY - MEYER, KAPUAK - MORRELL, PETER - CLEGG, MICHAEL
Nucleotide sequence diversity in genes involved in floral pigment production in *Ipomoea purpurea*
- 2:00 044003 GOS, GESSECA* - WRIGHT, STEPHEN - HAZZOURI, KHALED - WILLIAMSON, ROBERT
Genomic consequences of colonization and polyploidization in the genus *Capsella*
- 2:15 044004 FLAGEL, LEX* - VISION, TODD
Genomic structural variation in a natural population of the plant *Mimulus guttatus*
- 2:30 044005 ROY, EILEEN* - MEAGHER, RICHARD
The role of selection in the molecular evolution of the *Arabidopsis* actin-depolymerizing factor gene family
- 2:45 044006 FENSTER, CHARLIE* - RUTTER, MATTHEW - ROLES, ANGELA - CONNER, JEFFREY - SHAW, RUTH - SHAW, FRANK - SCHNEEBERGER, KORBINIAN - OSSOWSKI, STEPHAN - WEIGEL, DETLEF
Spontaneous mutations and fitness

1:30 PM - 3:00 PM 045 Contributed Papers
Life History I -- Chair: Rosemary Smith

Oklahoma C

- 1:30 045001 NEIMAN, MAURINE* - KAY, ADAM - WILTON, PETER - KRIST, AMY
Phosphorus limitation increases with ploidy level in asexual lineages of a New Zealand snail
- 1:45 045002 WATSON, CHARLES* - MAKOWSKY, ROBERT
A geographic and climatic assessment of reproductive mode in lizards
- 2:00 045003 CARNES, BRUCE* - RÜDIGER, RIESCH - SCHLUPP, INGO
The delayed impact of parental age on offspring mortality in mice
- 2:15 045004 MARSH-MATTHEWS, EDIE* - KNAPP, ROSEMARY - MCCAULEY, DAVID - LEE, ERIC
Brood reduction in response to stress in western mosquitofish: Implications for the Trexler-DeAngelis model of matrotrophy evolution
- 2:30 045005 SCHRADER, MATTHEW
The relationship between embryonic IGF2 expression and size at birth in populations of a placental fish
- 2:45 045006 NIITEPÖLD, KRISTJAN* - BOGGS, CAROLL
You cannot catch me, but you will get my children: Effect of nectar availability on butterfly life-history

1:30 PM - 3:00 PM 046 Contributed Papers**Oklahoma D*****Ecological Speciation -- Chair: Mark Sistrom***

- 1:30 046001 SISTROM, MARK* - DONNELLAN, STEVE - HUTCHINSON, MARK
Morphological differentiation correlates with ecological but not genetic divergence in a *Gehyra* gecko
- 1:45 046002 MARTIN, CHRISTOPHER* - PETER, WAINWRIGHT
Beyond ecological opportunity: adaptive radiation and the origins of novel ecological niches
- 2:00 046003 MCGEE, MATTHEW
Functional morphology and kinematics of feeding in stickleback: implications for ecological speciation
- 2:15 046004 SMITH, JULIE - BENKMAN, CRAIG*
Assortative flocking in crossbills and implications for ecological speciation
- 2:30 046005 HEBERT, JULIE* - HAWTHORNE, DAVID
The effects of host-plant hybridization on ecological speciation in a leafmining fly
- 2:45 046006 FUNK, DANIEL
Of 'host forms' and host races: the relevance of terminology for ecological speciation

1:45 PM - 3:00 PM 043 Contributed Papers**Oklahoma A*****Phylogenetics - Birds/Mammals -- Chair: Sushma Reddy***

- 1:45 043001 REDDY, SUSHMA* - DRISKELL, AMY - HACKETT, SHANNON - SCHULENBERG, TOM
Diversification and adaptive radiation of the vangas of Madagascar
- 2:00 043002 NYARI, ARPAD* - JOSEPH, LEO
Multilocus analysis of *Gerygone* warblers (Aves: Acanthizidae): phylogenetic relationships, taxonomy and their evolution into mangroves
- 2:15 043003 STEPPAN, SCOTT* - VANDERVREDE, LAWREN - JUSTINIANO, REBECCA - SCHENK, JOHN - BALETE, DANILO - RICKART, ERIC - HEANEY, LAWRENCE
Surprising diversity: multigene phylogeography of seven new species of forest-mice *Apomys* from Luzon (Philippines)
- 2:30 043004 NERY, MARIANA* - GONZÁLEZ, DIMAR - HOFFMANN, FEDERICO - OPAZO, JUAN
Resolution of the laurasiatherian phylogeny: evidence from genomic data
- 2:45 043005 JOHNSTON, ANNE* - ANTHONY, NICOLA
A multilocus phylogeny of the duiker antelope (Bovidae: Cephalophinae)

3:30 PM - 5:00 PM 047 Contributed Papers University B
Gene Flow III & Demography -- Chair: Emily Jane McTavish

- 3:30 047001 MCTAVISH, EMILY JANE* - HILLIS, DAVID
Tracking introgression between cattle subspecies using genomic SNP data
- 3:45 047002 CARROLL, E.* - CHILDERHOUSE, S. - ALEXANDER, ALANA - PATENAUDE, N. - STEEL, DEBBIE - CONSTANTINE, R. - SMITH, S. - BAKER, SCOTT
Who's your daddy? Paternity assignment and maternal fidelity in the New Zealand southern right whale
- 4:00 047003 DRAHEIM, H. M.* - SCRIBNER, K. T. - MOORE, J. A. - WINTERSTEIN, S. R. - ETTER, D. R.
Individual-based analysis of landscape effects on gene flow and connectivity of black bear (*Ursus americanus*) in Michigan's Northern Lower Peninsula
- 4:15 047004 EDMANDS, SUZANNE
Can long-term consequences of interpopulation hybridization be predicted from short-term crosses?
- 4:30 047005 CRUSE-SANDERS, JENNIFER - FRIAR, ELIZABETH* - HUANG, DAISIE - MASHAYEKHI, SAEIDEH - PRINCE, LINDA - PARKER, KATHLEEN - OTERO-ARNAIZ, ADRIANA
Genetic diversity, gene flow, and domestication of *Stenocereus stellatus* in Mexico
- 4:45 047006 CROFT, GENEVIEVE K.* - SCHAAL, BARBARAA.
From forests to farmland: the genetics of incipient domestication in *Byrsonima crassifolia* (L.) Kunth, Malpighiaceae

3:30 PM - 5:00 PM 048 Contributed Papers University A
Reproductive Isolation -- Chair: W. J. Etges

- 3:30 048001 NISTA, PHIL* - BROTHERS, AMANDA - DELPH, LYNDIA
Postmating reproductive isolation in *Silene*
- 3:45 048002 BYERS, KELSEY* - BRADSHAW, H. D. "TOBY", JR. - RIFFELL, JEFFREY
Specific floral odorants contribute to differential pollinator attraction in monkeyflowers (*Mimulus*)
- 4:00 048003 HAMILTON, BENJAMIN* - HARRISON, R. G.
Genetic patterns of reproductive isolation in the European corn borer moth
- 4:15 048004 MOSS, ANDREA* - PRICE, DONALD
A search for speciation genes among two Hawaiian Picture Wing *Drosophila*: *D. heteroneura* and *D. silvestris*

- 4:30 048005 SWAINLENZ,DEVJANEE
Speciation genetics in the budding yeast *Saccharomyces*
- 4:45 048006 THIBERT-PLANTE,XAVIER* - GAVRILETS,SERGEY
Evolution of mate choice: the trick behind the magic trait

3:30 PM - 5:00 PM 049 Contributed Papers Oklahoma A
Diversification - Mammals -- Chair: Melissa Gray

- 3:30 049001 SCHENK,JOHN* - STEPPAN,SCOTT
Bang, bang - thud! The Ecological Opportunity model of diversification receives conditional support from repeated continental colonizations by muroid rodents
- 3:45 049002 GAYDEN,TENZIN* - CHENNAKRISHNAIAH,SHILPA - REGUEIRO,MARIA -
UNDERHILL,PETER - HERRERA,RENE
Phylogeography of the human Y-chromosome in three culturally defined regions of historical Tibet
- 4:00 049003 SARVER,BRICE* - FORSHEE,NICK - SULLIVAN,JACK
Population structure of a hybridizing chipmunk (*Tamias amoenus*) in the Pacific Northwest
- 4:15 049004 CHENNAKRISHNAIAH,SHILPA* - PEREZ,DAVID - GAYDEN,TENZIN - RIVERA,LUIS -
HERRERA,RENE
Genetic diversity in two Dravidian populations from southern India

3:30 PM - 5:00 PM 050 Contributed Papers Oklahoma B
Molecular Evolution IV -- Chair: Christopher Willett

- 3:30 050001 WILLETT,CHRISTOPHER
Fast mtDNA evolution-even faster in the copepod *Tigriopus californicus*
- 3:45 050002 DUNNING,LUKE* - DENNIS,ALICE - BUCKLEY,THOMAS
Making mountains out of cold chills: Understanding the evolution of cold tolerance in alpine New Zealand stick insects using RNA-Seq
- 4:00 050003 CHONG,REBECCA* - SCHWARTZ,RACHEL - MUELLER,RACHEL
Low metabolic requirements relax selective constraints on salamander mitochondrial genes
- 4:15 050004 ALEXANDER,ALANA* - STEEL,DEBBIE - BAKER,SCOTT
How low can you go? Next-generation sequencing confirms low mitogenome diversity in the sperm whale

- 4:30 050005 SOTO-CALDERÓN, IVAN - SOTO-CALDERÓN, IVÁN* - LEE, EUN-JOO - JENSEN-SEAMAN, MICHAEL - ANTHONY, NICOLA
Factors affecting the relative abundance of nuclear copies of the mitochondrial control region (Numts) in great apes
- 4:45 050006 HAYWARD, JESSICA* - DUBOVI, EDWARD - SCARLETT, JANET - JANECKO, STEPHANIE - HOLMES, EDWARD - PARRISH, COLIN
Microevolution of H3N8 canine influenza virus in the United States

3:30 PM - 5:00 PM 051 Contributed Papers Oklahoma C
Life History II -- Chair: Punidan Jeyasingh

- 3:30 051001 ROYCHOWDHURY, PRIYANKA* - JEYASINGH, PUNIDAN
Evolution in a changing world: cultural eutrophication and physiological response of extant and “resurrected” *Daphnia* genotypes to dietary imbalances
- 3:45 051002 DAVIS, ROBERT* - JAVOIS, JUHAN - TAMMARU, TOOMAS
Applying an advanced phylogenetic comparative approach to solving lepidopteran life-history evolution
- 4:00 051003 SANTOS, JUAN* - CANNATELLA, DAVID
Aposematism as phenotypic integration in poison frogs
- 4:15 051004 GALL, B. G.* - BRODIE, E. D., III. - BRODIE, E. D., JR.
Newts, garter snakes, and caddisflies? Predation on early life-history stages and the implications for coevolution
- 4:30 051005 AIKENS, MELISSA* - ROACH, DEBORAH
Population dynamics and life history variation across the range of a Southern Appalachian endemic: implications for range limits
- 4:45 051006 FURNESS, ANDREW* - WALSH, MATTHEW - REZNICK, DAVID
Convergence of life history phenotypes in a Trinidadian killifish (*Rivulus hartii*)

3:30 PM - 5:00 PM 052 Contributed Papers**Oklahoma D*****Postzygotic Isolation -- Chair: Leslie Turner***

- 3:30 052001 TURNER, LESLIE* - WHITE, MICHAEL - TAUTZ, DIETHARD - PAYSEUR, BRET
Genetic mapping of testis expression traits associated with hybrid male sterility in house mice (*Mus musculus*)
- 3:45 052002 CAMPBELL, POLLY* - NACHMAN, MICHAEL
Reproductive isolation and mis-expression of the X chromosome during spermatogenesis in house mice
- 4:00 052003 SUZUKI, TAICHI* - NACHMAN, MICHAEL
Speciation and hybrid female subfertility in house mice
- 4:15 052004 LEONG, WAI
Do environmental factors contribute to post-zygotic isolation in *Tigriopus californicus*?
- 4:30 052005 BONETT, RONALD* - STEFFEN, MICHAEL - ANDREA, BLAIR - EMEL, SARAH - TRUJANO, ANA
Can alternative modes of development promote reproductive isolation among closely related populations?
- 4:45 052006 MANTHEY, JOSEPH* - SPELLMAN, GARTH
The fast-Z effect: increased efficacy of fixation in Z-linked markers in *Certhia americana*

5:30 PM - 6:30 PM L5 Special Lecture**Oklahoma E*****SSE Presidential Address***

- 5:30 L5001 COYNE, JERRY
Two flies on an island: A case study of speciation

- P1001 HUDSON-CIGARROA, ROBERT* - DIMOND, KRISTEN - ZUFALL, REBECCA
Patterns of polymorphism in the three genomes of *Tetrahymena thermophila*
- P1002 BROWN, BRYAN* - WEEKS, STEPHEN - LISA, PARK
Morphometrics and ontogenetics: Evolutionary dynamics of the spinicaudatan 'Clam Shrimp'
- P1003 GIRI, SHARMILA* - FULTON, JAMEY - BAUMS, ILIANA
The effect of temperature stress on lipid reserves in larvae of the threatened elkhorn coral, *Acropora palmata*
- P1004 AUWAE, RUSSELL* - GROFFMAN, PETER
Why are total soil respiration measurements higher in urban forests than rural forests?
- P1005 MARCY, A.* - HADLY, E.
By Tooth or Claw: Variations in pocket gopher (*Thomomys* spp.) digging morphology predict Distribution across an environmentally heterogeneous region
- P1006 SALOMON, ROCIO* - MUSOLF, BARBARA
Induced host shift effects on phenotype in the bean beetle, *Callosobruchus maculatus*
- P1007 STORY, ALICE* - BLACKMON, AKIA - PAL, ADITI
The benefit of mate choice in *Tribolium castaneum* male beetles
- P1008 ADU-OPPONG, BOAHEMAA* - JACK, CHANDRA - BUTTERY, NEIL - STRASSMANN, JOAN - QUELLER, DAVID
Cooperating with your neighbor: Is it a bad idea?
- P1009 PINEDA, JOSE MARIO* - BENGTSSON, BARBARA - SHOU, WENYING
The evolution of an incipient cooperative system
- P1010 LEKA, ALAMALIA* - STACY, ELIZABETHA.
Herbivory on two successional varieties of the Hawaiian dominant tree, *Metrosideros polymorpha*, and their hybrids
- P1011 JING, JOY* - LARSON, E. L. - MAROJA, LUANA
Male courtship intensity, song differences and other barriers to gene exchange in a cricket hybrid zone
- P1012 MCKENZIE, ZACHARY* - MAROJA, LUANA - RICHARDSON, DAVID
Can you smell your species? GC/MS chemical analysis of the cuticular hydrocarbons in the hybridizing crickets *Gryllus firmus* and *G. pennsylvanicus*
- P1013 GEILER-SAMEROTTE, KERRY - WANG, STEPHANIE* - DION, MICHAEL - BUDNIK, BOGDAN - HARTL, DANIEL - DRUMMOND, D. ALLAN
Misfolded proteins impose a fitness cost on exponentially growing budding yeast
- P1014 PECK, KAYLA* - JACKSON, ELEISHA - MASEL, JOANNA
The effect of translational errors on the evolvability of a protein

- P1015 HODGES, CHAVON* - STORZ, JAY - MORIYAMA, HIDEAKI
Epistasis and compensatory substitutions in the evolution of mammalian hemoglobin
- P1016 ROGERS, RAYSHARD* - BAER, C. F.
Effect of mutation accumulation environment on environmental variance in fitness in *Caenorhabditis*
- P1017 PHUONG, MARK* - ROWE, KEVIN - SMITH, ADAM - SINGHAL, SONAL - MORITZ, CRAIG
Species or lineages? Distribution modeling of ancient, phylogeographic lineages of California ground squirrels under present, past, and future climates
- P1018 RIVERA VICENS, RAMONE* - LUCAS, MATTHEW - SMITH, MATTHEW - WEIL, ERNESTO - SCHIZAS, NIKOLAOS
Genetic variation of *Symbiodinium* spp. of the coral host *Agaricia lamarcki* (Cnidaria: Scleractinia) between shallow and mesophotic habitats.
- P1019 MADRIGAL, ALMA* - CARTER, A. J. R.
The effects of inbreeding on the developmental stability of *Drosophila melanogaster*
- P1020 SINGH, OMI* - GEISELMAN, ASHLEY - SCHIELS, KAITLYN - WUND, MATTHEW
Environmental and genetic contributions to morphological divergence in a newly-established population of threespine stickleback fish (*Gasterosteus aculeatus*)
- P1021 DEWILDE, RACHEL
Population genetics of the Alaska Blackfish (*Dallia pectoralis*)
- P1022 YOHE, LAUREL* - REDDY, SUSHMA - MOYLE, ROBERT
Phylogeny and diversification of *Pomatorhinus ruficollis* using mitochondrial and nuclear genes
- P1023 SHARIEF, SARAH* - YOHE, LAUREL - MOYLE, ROBERT - REDDY, SUSHMA
Phylogeny and diversification of *Pomatorhinus ruficollis* using mitochondrial and nuclear genes
- P1024 NICHOLS, COURTNEY* - CAMPBELL, MATTHEW - BUSER, THADDAEUS - LOPEZ, J. ANDRES
Contrasting patterns of molecular evolution in euteleost fishes
- P1025 QUINTANA, SUREI* - BELL, MICHAEL - BOISSINOT, STEPHANE
Demographic history of threespine stickleback populations in Alaska
- P1026 RAMÍREZ, LIZETTE* - ECONOMO, EVAN - BLANCHARD, BENJAMIN - KNOWLES, L. LACEY
The evolutionary history of Solomon Islands *Pheidole* (Hymenoptera: Formicidae) inferred with mtDNA
- P1027 RISSLER, LESLIE - BLALOCK, ASHLEY* - DUNCAN, SARAH
Acceptance of evolution in relation to university students' class, major, and education: Is it really that bad in the Deep South?

- P1028 SHUMATE, ALICE
Training students in scientific thinking: using Bloom's Taxonomy to build a better case study
- P1029 GIBSON, J. PHIL* - HOEFNAGELS, MARIELLE
A tree-thinking curriculum for Introductory Biology
- P1030 HIATT, ANNAC.* - FRENCH, DONALD P.
Evo-Devo in the classroom: A survey of major concepts and student understanding
- P1031 JARRELL, DAVID
Undergraduate research in the classroom: screening noncoding plastid regions as part of a study to assess the evolution of an orchid pseudogene
- P1032 DEMBOSKI, JOHN* - COOK, JOE - LACEY, EILEEN - ICKERT-BOND, STEFFI - EDWARDS, SCOTT - BELL, KAYCE
AIM-UP!: Integrating museum collections into undergraduate education
- P1033 SMITH, JAMES* - CHERUVELIL, KENDRA - AUVENSHINE, STACIE
Tree-thinking approaches to teaching common ancestry: Incorporating molecular phylogenies
- P1034 WELCH, COREY
Why Native Americans don't buy evolutionary biology and the land bridge (and why we can and should)
- P1035 MUSOLF, BARBARA
Bean beetle host shifts provide evolutionary questions for the undergraduate research student
- P1036 WILGENBUSCH, J. C.* - HUANG, WEN - GALLIVAN, K. A.
An evaluation of tree-to-tree distance metrics used to visualize phylogenetic tree landscapes
- P1037 WRIGHT, APRIL* - HILLIS, DAVID
The effects of gene conversion on phylogenetic reconstruction
- P1038 DOLGOVA, OLGA* - BONETT, RONALD
Using transcriptomes for species-level phylogenies
- P1039 EMERSON, G. L.* - CARROLL, D. S. - LI, Y. - SAMMONS, S. A. - OLSON, V. A. - FRACE, M. A. - NAKAZAWA, Y. J. - CZERNY, C. P. - TRYLAND, M. - KOLODZIEJEK, J. - NOWOTNY, N. - OLSEN-RASMUSSEN, M. - KHRISTOVA, M. - GOVIL, D. - KAREM, K. - DAMON, I. K. - MEYER, H.
Chasing Jenner's vaccine: Revisiting *cowpox virus* classification
- P1040 HEPBURN, NANCY* - SCHMIDT, DEREK - MOWER, JEFFREY
Mechanisms of intron loss from the mitochondrial *cox2* gene of plants
- P1041 JAIN, KANIKA* - ZHANG, YIZHONG - MOWER, JEFFREY
Massive horizontal gene transfer in a plant mitochondrial genome
- P1042 ZOKAN, MARCUS* - ROBINSON, JOHN - WARES, JOHN - DRAKE, JOHN
Cryptic species of *Chydorus* (Crustacea: Cladocera) in the Southeastern USA

- P1043 DAVIS, STEVEN
Evolution of the weevil rostrum (Coleoptera: Curculionidae): internal structure and evolutionary trends
- P1044 SKOMROCK, NICHOLAS* - DALY, MARYMEGAN
Phylogenetic placement of deep-sea zoanths (Cnidaria: Anthozoa: Zoanthidea) using mitochondrial and nuclear markers
- P1045 THOMPSON, ANDREW* - BETANCUR-R., RICARDO - ORTI, GUILLERMO
The phylogeny of piranhas using gene tree-species tree methods
- P1046 SPANOS, ZOE* - LYRA, MARIANA - CARNAVAL, ANA
Genetic structure in Brazilian glass frogs (*Vitreorana*)
- P1047 VAZQUEZ-MIRANDA, HERNAN* - BARKER, F. KEITH
Speciation in the Neotropics: a multi locus phylogeny of *Campylorhynchus* wrens (Aves: Troglodytidae)
- P1048 GALLA, STEPHANIE* - JOHNSON, JEFF
A multi-locus approach to investigate the demographic history of prairie grouse (Genus: *Tympanuchus*)
- P1049 MASSATTI, ROB* - KNOWLES, L. LACEY
Are habitat affinities phylogenetically conserved or divergent among Rocky Mountain sedges?
- P1050 WELLBORN, GARY* - WITT, JONATHAN
Evolutionary patterns in the radiation of a crustacean cryptic species complex
- P1051 VELASQUEZ, JOHANNA
Factors involved in Octocorallia species coexistence in the Caribbean region at two different scales: An evolutionary perspective
- P1052 ACUNA-POSADA, ROCIO* - SÁNCHEZ, JUAN
Fine-scale population structure in two reef-building corals along the Colombian Caribbean Coast
- P1053 BLOOM, DEVIN* - PILLER, KYLE
Does habitat control lineage diversification rates? A test using molecular phylogeny and biogeography of silversides (Atherinopsidae)
- P1054 SHEPARD, DONALD* - KOZAK, KENNETH
Do Grinnellian or Eltonian niches evolve faster? A comparative analysis with dusky salamanders (Plethodontidae: *Desmognathus*)
- P1055 FULTON, TARA* - COUSAR, MICHAEL - ZAZULA, GRANT - SHAPIRO, BETH
Do glacial cycles drive walrus diversity?
- P1056 FRISCH, DAGMAR* - MORTON, PHILIP - CULVER, BILLY - JEYASINGH, PUNIDAN - WEIDER, LAWRENCE J.
Time travelling: The use of resurrection ecology to reconstruct spatio-temporal population genetic structure in *Daphnia*

- P1057 HERRERA, NATHANAEL* - STEPPAN, SCOTT
Bridging the Gap: Combining ecology, paleontology, and genetics to elucidate the evolution of cockles and giant clams (Bivalvia: Cardiidae)
- P1058 FLIGHT, PATRICK* - RAND, DAVID
The neutral and selective population genetic history of the North Atlantic barnacle, *Semibalanus balanoides*
- P1059 HUANG, JEN-PAN* - KNOWLES, L. LACEY
Island connectivity and speciation across the LGM: a study of rhinoceros beetles (genus *Xylotrupes*) across islands in Asian-Australian region
- P1060 VANELS, PAUL* - CICERO, CARLA - KLIČKA, JOHN
High latitude genetic diversity in a widespread boreal bird: Gray Jay (*Perisoreus canadensis*)
- P1061 TIBBITTS, JUSTIN* - BUBAC, CHRISTINE - MANTHEY, JOSEPH - KLIČKA, JOHN - SPELLMAN, GARTH
Testing alternative hypotheses of niche evolution in the Hairy Woodpecker
- P1062 TILEY, GEORGE* - ESERMAN, LAUREN - MAJOR, SEAN - LEBLANC, GISELLE - MILLER, RICHARD
Phylogeography of *Ipomoea nil*
- P1063 MOLINA-HENAO, YHERSON FRANCHESCO* - JARAMILLO-SIERRA, MARÍA ALEJANDRA
The role of geography and ecology in species diversification of neotropical subgenus *Ottonia* (*Piper*: Piperaceae)
- P1064 HOWARD, AARON* - BARROWS, EDWARD
Geitonogamy and mating systems in pollen-bearing clonal plants
- P1065 WILLIAMS, C. F.
Estimating modes of selfing in a gynodioecious plant, *Geranium richardsonii*
- P1066 CALIXTO-BOTIA, IVAN* - SÁNCHEZ, JUAN
A bioinformatic framework to detect local adaptation in genome scans of different morphotypes of a gorgonian coral
- P1067 DUCHEN, PABLO
Demography of North American and African *Drosophila melanogaster*
- P1068 COOK, ERIN* - HANNA, CAUSE - DARE, LYNDZEY - THOMPSON, ARIEL - PALASKI, AMANDA - GOODISMAN, MICHAEL
Sociogenetic structure of invasive yellowjacket supercolonies
- P1069 SCHOLL, KATLYN* - ALLEN, JULIE - REED, DAVID
Determining population structure of a primate parasite

- P1070 MACRANDER, JASON* - WILLIS, STUART - HRBEK, TOMAS - ORTI, GUILLERMO
Microsatellite development and population genetics of the Amazonian peacock bass *Cichla temensis* (Perciformes: Cichlidae)
- P1071 HOSTERT, ELLEN* - ZEGERS, GERRY
MHC variation in Atlantic salmon and rainbow smelt
- P1072 UNMACK, PETER
Using GIS to predict how do changes in sea level potentially influence phylogeographic patterns in freshwater and coastal marine fishes
- P1073 KIMBLE, STEVE* - WILLIAMS, ROD
Population genetics of the Easter box turtle *Terrapene carolina carolina*
- P1074 KLEIN, ELAINE* - REEDER, TOD - FISHER, ROBERT
Population-level divergence and dynamics of *Emoia impar* (Squamata: Scincidae) on western Pacific Islands
- P1075 SIVAMANI, NATARAJAN
Evidence of positively selected sites in tissue kallikreins
- P1076 BITTNER, NOELLE* - DERMYER, LINDSEY - HSIEH, PINGHSUN - CAMPBELL, POLLY - NACHMAN, MICHAEL
Molecular population genetics of *Brcal* and *Brc2*, candidate genes for reproductive isolation in house mice
- P1077 LAFLER, MARISSA* - NUNES, SCOTT - DEVER, JENNIFER
Fine-scale genetic structure in (*Spermophilus beldingi*), a sexually promiscuous ground squirrel in the High Sierra
- P1078 GOODNIGHT, CHARLES
Defining the individual: A multilevel selection approach
- P1079 RUPP, MATTHEW* - OFRIA, CHARLES - TORNG, ERIC - SCHMIDT, THOMAS M.
The evolution of mutation bias
- P1080 STAPLES, RACHEL* - COOPER, VAUGHN
The nature of beneficial mutations in structured environments
- P1081 GOMBAR, SAURABH* - MACCARTHY, THOMAS - BERGMAN, AVIV
Epigenetic decoupling of environmental and mutational robustness creates the conditions for the transition to multicellularity
- P1082 WEITEMIER, KEVIN* - STRAUB, SHANNON - PARKS, MATTHEW - CRONN, RICHARD - FISHBEIN, MARK - LISTON, AARON
Intra-genomic rDNA sequence diversity across the milkweed genus (*Asclepias*, Apocynaceae)
- P1083 KOVACHEVA, EKATERINA* - VANDERGON, VIRGINIA
Evolution of anthocyanidin synthase in Hawaiian silverswords and California tarweeds

- P1084 RODRIGUEZ, CHRISTIAN* - SMITH, BRETT - VANDERGON, VIRGINIA
Gene duplication of chalcone synthase in Hawaiian silverswords and California tarweeds
- P1085 KNAPP, ROSEMARY* - BROUGHTON, RICHARD
Androgen receptor evolution and reproductive variation in fishes
- P1086 MONFRONT, STANISLAS* - BANTIKASSEGN, AMLAK
Is PGI under balancing selection in tropical *Heliconius* butterflies?
- P1087 WON, JIHYUN* - LANC, IRENA - EMRICH, SCOTT - PFRENDER, MICHAEL
Molecular evolution of cuticle protein genes in *Daphnia*
- P1088 KRAUSE, ANITA* - SERB, JEANNE
Molecular convergence of Gq-opsin is correlated with behavior in scallops (Bivalvia: Pectinidae)
- P1089 ROBERTSON, MARTA* - ROLES, ANGELA
Measuring DNA methylation variation in *Arabidopsis thaliana*
- P1090 SHAVER, AMANDAO* - CARTWRIGHT, PAULYN
Characterization of Hox genes in the parasitic cnidarian *Polypodium hydriforme*
- P1091 WANG, ZENGGUANG* - ZHANG, JIANZHI
Toward understanding gene essentiality differences between species
- P1092 GUO, WENHU* - ZHANG, YIZHONG - MOWER, JEFFREY P
Group II Intron evolution in land plants: the mystery of gain and loss
- P1093 RATNAPPAN, RAMESH* - BAILIN, SAMUELS. - COMERON, JOSEPM.
Crossing-over and gene-conversion maps in *Drosophila melanogaster* using Illumina Deep-Sequencing
- P1094 GRAPPUTO, ALESSANDRO* - KUMAR, ABHISHEK
Transcriptomic analysis of the invasive Colorado potato beetle (*Leptinotarsa decemlineata*)
- P1095 PAIRETT, AUTUM* - SERB, JEANNE
The effects of biases and gaps in transcriptome data: A comparative approach
- P1096 JI, YANZHU - WIJAYAWARDENA, BHAGYA* - EO, SOO HYUNG - HALE, MATTHEW -
MARRA, NICHOLAS - DEWOODY, J. ANDREW
Horizontal transfer of parasite genes and/or transposable elements: evidence from vertebrate transcriptomes
- P1097 JUE, NATHANIEL* - O'NEILL, MICHAEL
Transcriptomics of the placental guppy, *Poeciliopsis prolifica*
- P1098 PLATT, R. N.* - RAY, DAVID
Recent reduction of non-LTR retrotransposon activity in the genome of the thirteen-lined ground squirrel, *Spermophilus tridecemlineatus*
- P1099 VENHUIZEN, KRISTEN - CHANDRASEKARAN, CHITRA*
Conserved arrangement of nested genes at the *Drosophila bgcn/wibg* locus

- P1100 RAND, DAVID
Reverse Ecology: IGERT Program in Computational Integration of Genomes, Organisms and Environments - NextGen Sequencing in Ecology, Evolution and Environmental Biology
- P1101 BAACK, E.* - ATKINS, P. - SAMSON, Z. - SAMBATTI, J. - ORTIZ-BARRIENTOS, DANIEL
Effects of cpDNA haplotype on back-cross fitness in *Helianthus*
- P1102 HORNER, JOHN* - CRAIG, TIMOTHY - ITAMI, JOANNE
Evidence for plant genotype x insect genotype interaction in the *Eurosta - Solidago* system
- P1103 BREKKE, THOMAS* - GOOD, JEFFREY
Abnormal hybrid growth in dwarf hamsters
- P1104 SCHAEFER, JACOB - KREISER, BRIAN - SCHMIDT, BJORN* - DUVERNELL, DAVID
Temporal variability in a *Fundulus* hybrid contact zone in Mississippi
- P1105 JARVIS, LARA* - MCCARTNEY, MICHAEL
Reproductive isolation in the northwestern Atlantic *Mytilus* hybrid zone: Does conspecific sperm precedence play a role?
- P1106 MIDFORD, PETER
Arachnolingua: A database of spider behavior terms and descriptions
- P1107 SMITH, ROSEMARY
Age and seasonal effects on male and female parental investment behaviors in the burying beetle (*Nicrophorus investigator*)
- P1108 SCHWAGMEYER, P.L.* - MOCK, DOUGLAS
Reduced parental effort enables increased mating effort, but which type of mating effort?
- P1109 STRICKLER, STEPHANIE
Visual and vocal traits for parental recognition of young
- P1110 LARSON, PAUL* - DALY, MARYMEGAN
Mating system in the brooding sea anemone *Cnidopus japonicus*
- P1111 CABRAL, L. G.* - FARES, S. - MADRID, A. - MUELLER, LAURENCE
Laboratory selection for ovoviparous behavior in *Drosophila melanogaster*
- P1112 SMITH, VICTORIALEE* - ROSENTHAL, GIL
Mechanisms of individual variation and repeatability in mate choice in the swordtail fish, *X. birchmanni*
- P1113 PASSOW, COURTNEY* - KINDSVATER, HOLLY - PACZOLT, KIM - ROSENTHAL, GIL
Multiple mating in the livebearing fish *Xiphophorus birchmanni*
- P1114 SIMPSON, SUZANNE* - KINDSVATER, HOLLY - ROSENTHAL, GIL
Swordtail mate choice and reproductive allocation: effects of male condition
- P1115 YONG, LENGXOB - PIEROTTI, MICHELE - MCKINNON, JEFFREY*
Dominance and aggression in female threespine sticklebacks with masculinized throat coloration

- P1116 SCHAEFER, JACOB - CHAMPAGNE, CHARLES - GUTIERREZ, MELISSA - CLARK, SCOTT* - KREISER, BRIAN - DUVERNELL, DAVID
Variability in spot count phenotype in relation to reproductive investment, turbidity and sexual selection
- P1117 DAI, CAN* - GALLOWAY, LAURA
Sexual selection in a hermaphroditic plant: pollination and resource manipulation
- P1118 RODD, HELEN* - DE SERRANO, ALEX - WEADICK, CAMERON - PRICE, ANNA
Predatory prawn taps into a sensory bias of the Trinidadian guppy
- P1119 MÁRQUEZ, ROBERTO* - AMEZQUITA, ADOLFO
Does aposematic equivalence explain yellow colorations in hypertoxic frogs (*Phyllobates* spp)?
- P1120 LAVERDE-R, OSCAR* - CADENA, CARLOS DANIEL
Song or color: is there a trade-off between communication signals?
- P1121 ONEAL, ELEN
Does genomic conflict underlie reproductive isolation in the *Mimulus guttatus* complex?
- P1122 SANTOS, MARTA* - NGUYEN, DERRICK - MUELLER, LAURENCE - ROSE, MICHAEL
Aging and late life in urea-adapted populations of *Drosophila melanogaster*
- P1123 REYNOLDS, ROSE* - SIKKINK, KRISTIN - CRESKO, BILL - PHILLIPS, PATRICK
Experimental evolution of stress response and correlated effects on longevity in *Caenorhabditis remanei*
- P1124 REGAN, KERRY* - PFRENDER, MICHAEL
The effects of thermal stress on *Daphnia pulex* across a latitudinal gradient
- P1125 ROTH, ANDY* - CONDON, MARTY - LEWIS, MATTHEW - SCHEFFER, SONJA - WHARTON, ROBERT
Variation in braconid parasitism of florivorous neotropical tephritids
- P1126 TETREAUULT, HANNAH* - RODEWALD, CODY - GOAD, RACHEL - OLSEN, JAKE - BAER, SARA - MARICLE, BRIAN - MORGAN, TED - BELLO, NORA - JOHNSON, LORETTA
Phenotypic variation and genetic differentiation of a dominant prairie grass along a longitudinal precipitation gradient
- P1127 NIELSEN, MATTHEW* - REGIS, FERRIERE
Adaptive dynamics for consumers of a temporally fluctuating resource
- P1128 TITLE, PASCAL* - BURNS, KEVIN
Acquiring and processing occurrence data for georeferencing, niche modeling and subsequent comparative analyses
- P1129 DESINOR, FRANCOIS* - LUDVIK, CHRIS - BOEHM, JOEL - HICKERSON, MICHAEL
Sampling man-made structures in Moorea: a biodiversity assessment of sessile marine fauna

MONDAY, JUNE 20

8:15 AM - 10:00 AM 053 Contributed Papers University C
Life History & Morphological Evolution I -- Chair: Linden Higgins

- 8:15 053001 HIGGINS, LINDEN* - GOODNIGHT, CHARLES
Asynchronous maturation in a spider: A cost of female gigantism?
- 8:30 053002 URBANSKI, JENNIFER* - BENOIT, JOSH - MICHAUD, ROBERT - O'DONNELL, DEBORAH - DE COTIIS, MARK - DENLINGER, DAVID - ARMBRUSTER, PETER
The evolution of body size, diapause timing and stress resistance in the invasive mosquito *Aedes albopictus*
- 8:45 053003 APPLEBY, LARAR
Proximate causes of small workers during colony founding
- 9:00 053004 SCHAEFER, JACOB* - KREISER, BRIAN - DUVERNELL, DAVID
Temperature, body size and variability in topminnow developmental rates
- 9:15 053005 BASSAR, RONALD* - REZNICK, DAVID
Effects of density on life history evolution in Trinidadian guppies
- 9:30 053006 TORRES-MEJIA, MAURICIO* - REZNICK, DAVID
Adaptation to disturbances: Effect of flow regime on body shape and life history of Trinidadian guppies
- 9:45 053007 LANDY, J. ALEX* - TRAVIS, JOSEPH - SCHRADER, MATTHEW
Shape variation and its ecological correlates in the least killifish, *Heterandria formosa*

8:30 AM - 10:00 AM 054 Contributed Papers University B
Population Genetics - Plants -- Chair: Richard Moore

- 8:30 054001 MOORE, RICHARD* - WEINGARTNER, LAURA - HARKESS, ALEX - BROWN, JENNIFER
Contrasting patterns of polymorphism and divergence on the *Carica papaya* X and Y chromosomes
- 8:45 054002 DERIEG, NATHAN* - HODGES, SCOTT
High-throughput genotyping of color variants in natural populations of Rocky Mountain columbine, *Aquilegia coerulea*
- 9:00 054003 LACK, JUSTIN* - STANLEY, CRAIG - RAGAVENDRAN, ASHOK - JEYASINGH, PUNIDAN
Selection for nitrogen conservation in the synonymous codon usage of plants
- 9:15 054004 RODA, FEDERICO* - WALTER, GREGORY - LIU, HUANLE - ORTIZ-BARRIENTOS, DANIEL
Genomic footprints of the parallel adaptation to coastal environments in an Australian daisy

- 9:30 054005 MILLER, RICHARD* - RAUSHER, MARK
Evolution of plant size in the common morning glory, *Ipomoea purpurea*
- 9:45 054006 MOJICA, JULIUS* - LEE, YOUNG WHA - WILLIS, JOHN - KELLY, JOHN
Evidence for a combination of selective mechanisms maintaining quantitative genetic variation in natural populations

8:30 AM - 10:00 AM 056 Contributed Papers
Theory - Populations I -- Chair: Hamish Spencer

Oklahoma A

- 8:30 056001 SPENCER, HAMISH* - GEOGHEGAN, JEMMA
Population-epigenetic models of selection
- 8:45 056002 BERGMAN, AVIV
The evolution of robustness involves balancing of local sequence and network architecture level mechanisms
- 9:00 056003 MASEL, JOANNA* - RAJON, ETIENNE
Evolution of molecular error rates and the consequences for evolvability
- 9:15 056004 LACHANCE, JOSEPH* - JOHNSON, NORMAN - TRUE, JOHN
The population genetics of X-autosome synthetic incompatibilities and the origins of Haldane's rule
- 9:30 056005 O'FALLON, BRENDAN
Estimating population size from serially sampled sequences under selection
- 9:45 056006 LOEWE, LAURENCE
Slicing the adaptive landscape into seven levels

8:30 AM - 10:00 AM 057 Contributed Papers
Diversification - Species Interactions -- Chair: Andrew Hendry

Oklahoma B

- 8:30 057001 HENDRY, ANDREW* - HENDRY, ASPEN - HENDRY, CEDAR
Hendry vineyard stickleback
- 8:45 057002 ALVARADO-SERRANO, DIEGO F.* - KNOWLES, L. LACEY
Assessing how environmental heterogeneity across the tropical Andes impact species diversity?
- 9:00 057003 MARCHÁN-RIVADENEIRA, MARIARAQUEL* - ALVARADO-SERRANO, DIEGO - BAKER, ROBERT
Concordance between morphological, genetic, and environmental variation in Neotropical fruit-eating bats (*Artibeus*, Chiroptera: Phyllostomidae)
- 9:15 057004 FORISTER, MATT* - GOMPERT, ZACH - NICE, CHRIS - FORDYCE, JAMES
Old friends and new hosts: mutualists and the complexity of diet breadth in herbivorous insects

- 9:30 057005 POWELL, SCOTT* - MARQUIS, ROBERT J. - VASCONCELOS, HERALDO - CAMAROTA, FLAVIO - PRIEST, GALEN
On the evolutionary impacts of ecosystem engineers: Have beetle-produced cavities influenced phenotypic diversification in a lineage of cavity-nesting ants?
- 9:45 057006 SOBRAL, MAR* - LARRINAGA, ASIERR. - GUTIÁN, PABLO - GUTIÁN, JOSÉ
Subindividual variation of fruit size. Relationship with phenotypic selective pressures along a latitudinal gradient

8:30 AM - 10:00 AM 058 Contributed Papers Oklahoma C
Diversification - Paleo -- Chair: Julie Meachen-Samuels

- 8:30 058001 MEACHEN-SAMUELS, JULIE* - SAMUELS, JOSHUA
Bigger, stronger and faster in the Pleistocene: evolutionary change in coyotes (*Canis latrans*) after the megafaunal extinction
- 8:45 058002 BAPST, DAVID
Patterns of diversification on a large species-level supertree of the extinct planktic Graptolites
- 9:00 058003 HUNT, GENE
Using fossils to test the link between speciation and phenotypic evolution
- 9:15 058004 ASTROP, TIMOTHY* - WEEKS, STEPHEN - LISA, PARK
Investigating the evolution of hermaphroditism and androdioecy in crustaceans: establishing an integrated palaeobiological approach using the reproductively labile clam shrimp (*Spinicaudata*)
- 9:30 058005 ETIENNE, RAMPAL* - HAEGEMAN, BART - AZE, TRACY - PEARSON, PAUL - PURVIS, ANDY - PHILLIMORE, ALBERT
Predicting the past: reconciling molecular phylogenies with the fossil record
- 9:45 058006 SLATER, GRAHAM* - HARMON, LUKE - ALFARO, MICHAEL
Roots, rates and fossil states: A Bayesian approach for integrating fossil character information into comparative analyses

8:45 AM - 10:00 AM 059 Contributed Papers Oklahoma D
Genomes - Comparative -- Chair: Nathaniel Jue

- 8:45 059001 CRIDLAND, JULIE* - THORNTON, KEVIN
Transposable elements insertions in 162 genomes of *Drosophila melanogaster*
- 9:00 059002 DEAGLE, BRUCE* - JONES, FELICITY - KINGSLEY, DAVID - REIMCHEN, TOM
Population genomics of parallel phenotypic evolution in stream-lake stickleback
- 9:15 059003 DOYLE, JACQUELINE* - SIEGMUND, GREGOR - RUHL, JOSEPH - EO, SOO HYUNG - HALE, MATTHEW - MARRA, NICHOLAS - WASER, PETER - DEWOODY, J. ANDREW
Comparative microsatellite analyses across three vertebrate transcriptomes

- 9:30 059004 FREEDMAN, ADAM* - SQUIRE, KEVIN - CHIN, ROBERT - SCHWEIZER, RENA - SILVA, PEDRO - GALAVERNI, MARCO - BOYKO, ADAM - CHEN, ZUGEN - PARKER, HEIDI - OSTRANDER, ELAINE - BUSTAMANTE, CARLOS - BORMANN CHUNG, CHRISTINA - DOAN, QUYNH - HARKINS, TIMOTHY - LEE, CLARENCE - NELSON, STANLEY - WAYNE, ROBERT - NOVEMBRE, JOHN
Dissecting the divergence of dogs from their wild ancestors: Complete genome sequences of 5 close relatives to modern dog breeds
- 9:45 059005 CASTOE, TODD* - DE KONING, APJASON - HALL, KATHRYN - YOKOYAMA, KEN - FESCHOTTE, CEDRIC - SECOR, STEPHEN - POLLOCK, D. D.
The python genome and evolutionary genomics of snakes

9:00 AM - 11:30 AM Sym5 Symposium Oklahoma E
SSB Symposium: Ernst Mayr Symposium -- Chair: Sydney Cameron

- 9:00 Sym55001 EWERS, CHRISTINE
Phylogeny and biogeography of Atlantic and East-Pacific species of the box crab genera *Calappa* Weber, 1759 and *Calappula* Galil, 1997 (Brachyura: Calappidae), with special reference to gonopod morphology
- 9:15 Sym55002 HERTWECK, KATEL
What's in a \$100 genome? Assembling three genomic partitions from genomic survey sequences
- 9:30 Sym55003 HAGEY, TRAVIS
Dynamics of gecko evolution
- 9:45 Sym55004 OGBURN, R. MATTHEW* - EDWARDS, ERIKA
Repeated evolution of three-dimensional leaf venation unlocks phenotypic space for the exploration of succulence
- 10:00 Break
- 10:30 Sym55006 HAMM, CHRISTOPHER* - WILLIAMS, BARRY - LANDIS, DOUG
What is the Mitchell's satyr? Species concepts and conservation genetics of the federally endangered Mitchell's satyr butterfly, *Neonympha mitchellii mitchellii*.
- 10:45 Sym55007 WILCOX, CHRISTIE
Evidence for widespread hybridization between two closely related lionfish species
- 11:00 Sym55008 HE, KAI* - JIANG, XUE-LONG
"Sky Islands" in Southwest China: Phylogeographic patterns of three insectivore species

11:15 Sym55009 NASRALLAH, CHRIS

Evaluation of phylogenetic substitution models via the population genetics of compensatory evolution in RNA

9:15 AM - 10:00 AM 055 Contributed Papers

University A

Reproduction & Sexual Selection I -- Chair: Leah Dudley

9:15 055001 DUDLEY, LEAH* - HOVE, ALISA - MAZER, SUSAN

From elegant to slender, does phenotypic selection on leaf physiological traits predict the divergence between sister *Clarkia* species, *C. unguiculata* and *C. exilis*?

9:30 055002 HERLIHY, CHRISTOPHER* - FOLKS, JULIE - DIXON, ANDREA - BUSCH, JEREMIAH

Evolutionary maintenance of a flower color polymorphism in *Leavenworthia stylosa*

9:45 055003 JOHNSON, MATTHEW* - SHAW, A. JONATHAN

Fecundity and fitness variance in a natural *Sphagnum* population: potential for sexual selection?

10:30 AM - 12:00 PM 060 Contributed Papers

University C

Morphological Evolution II -- Chair: Simone Des Roches

10:30 060001 DES ROCHES, SIMONE* - TORRES DAL, JACK - HARMON, LUKE - ROSENBLUM, ERICA
Comparative functional morphology in three recently adapted lizards at White Sands

10:45 060002 BERGMANN, PHILIP* - BERK, CAMRYN

The evolution of defensive horn allometry in horned lizards (*Phrynosoma*)

11:00 060003 SCHMITZ, LARS* - PETER, WAINWRIGHT

The effect of diel activity pattern on eye shape in reef fishes

11:15 060004 PRICE, SAMANTHA* - PETER, WAINWRIGHT - HOLZMAN, ROI - TAVERA, JOSE - NEAR, THOMAS

Reef habitats promote the evolution of morphological diversity in fishes

11:30 060005 MCGUIRE, JENNY

Past climate set the stage for future responses to climate change: morphological evolution in *Microtus californicus*

11:45 060006 NANDINI, R.* - DOBSON, F. STEPHEN

Flying squirrels follow Rensch's Rule: gliding and functional advantages of female-biased dimorphism

10:30 AM - 12:00 PM 061 Contributed Papers**University B*****Adaptation - Plants -- Chair: Santiago Gonzalez-Martinez***

- 10:30 061001 GONZALEZ-MARTINEZ, SANTIAGO* - GRIVET, DELPHINE - VOLTAS, JORDI - JARAMILLO-CORREA, JUAN PABLO - CLIMENT, JOSE - VENDRAMIN, GIOVANNI - ALIA, RICARDO
Testing for local adaptation and genetic clines in Mediterranean pines
- 10:45 061002 MOE, ANNIKA
Species discovery in the fig pollination mutualism and its implications for host specificity
- 11:00 061003 MUCHHALA, NATHAN* - THOMSON, JAMES
Fur versus feathers: Pollen delivery by bats and hummingbirds and consequences for pollen production
- 11:15 061004 PYHÄJÄRVI, TANJA* - HUFFORD, MATTHEW - ROSS-IBARRA, JEFFREY
Genomic effects of local adaptation in the wild relatives of maize
- 11:30 061005 ZELLMER, AMANDA* - CARSTENS, BRYAN
Testing for local adaptation in carnivorous plant populations using global climate data and next-generation sequencing
- 11:45 061006 KOOYERS, NICHOLAS* - OLSEN, KENNETH
Replaying Life's Tape: Determining the mechanisms underlying parallel evolution of cyanogenesis clines in white clover (*Trifolium repens* L.)

10:30 AM - 12:00 PM 062 Contributed Papers**University A*****Reproduction & Sexual Selection II - Plants -- Chair: Judy Stone***

- 10:30 062001 STONE, JUDY
Maternal reproductive success of selfing variants across a steep ecological gradient
- 10:45 062002 BUSCH, JEREMIAH W.* - WITTHUHN, TYLER - JOSEPH, MICHAEL
Should there be a difference in diversity between gametophytic and sporophytic self-incompatibility systems?
- 11:00 062003 WEBER, JENNIFER* - WELLER, STEPHEN - SAKAI, ANN - KHUU, DIANA - NGUYEN, LONG-QUAN
Can three reproductive morphs be maintained in a sexually reproducing population?
- 11:15 062004 MILANO, ELIZABETH R.* - KENNEY, AMANDA M. - JUENGER, THOMAS E.
The genetic architecture of floral traits in an *Ipomopsis aggregata* hybrid zone
- 11:30 062005 CHANG, SHUMEI
Genetic variation in pollen grain size in the tall morning glory, *Ipomoea purpurea*
- 11:45 062006 STONE, JAMES* - STORCHOVÁ, HELENA - OLSON, MATT
Sex-specific fitness effects of changes in the pollinator community of gynodioecious *Silene vulgaris* in Virginia and the Czech Republic

10:30 AM - 12:00 PM 063 Contributed Papers
Theory - Populations II -- Chair: Ashley Carter

Oklahoma A

- 10:30 063001 CARTER,ASHLEY
A novel approximation for the fixation time of a single advantageous mutation
- 10:45 063002 COVERT,ART* - FINE,ISAAC - OFRIA,CHARLES
Forks in the road: Adaptive navigation of multiple paths to high fitness on rugged landscapes
- 11:00 063003 HARTING,JOHN* - RICE,SEAN
Evolution with nonlinear inheritance
- 11:15 063004 GRISWOLD,CORTLAND* - EISNER,DANIELLE
The mapping of epistatic effects onto a genealogical tree in haploid populations
- 11:30 063005 BOUCHARD,FRANK* - WAYNE,MARTA
An individual-based model of admixture and adaptation to a novel environment by invading populations
- 11:45 063006 McCANDLISH,DAVID
Evolution on arbitrary fitness landscapes when mutation is weak

10:30 AM - 12:00 PM 064 Contributed Papers
Geography & Diversity -- Chair: Elaine Klein

Oklahoma B

- 10:30 064001 CADENA,CARLOS DANIEL* - SANÍN,CAMILO - JIMÉNEZ,IVÁN - CUERVO,ANDRÉS - FJELDSÅ,JON - RAHBEK,CARSTEN
Linking spatial variation in species richness to diversification rates in Neotropical birds
- 10:45 064002 STACY,ELIZABETH* - JOHANSEN,JENNIFER - SAKISHIMA,TOMOKO - PILLON, YOHAN
Metrosideros polymorpha varieties across space and time on Hawaii Island
- 11:00 064003 WOGAN,GUIN
The latitudinal diversity gradient and amphibians
- 11:15 064004 TASSONE,ERICA* - VERRELLI,BRIAN
Understanding Cape Floristic Region species diversity: A population genetic and landscape approach
- 11:30 064005 MUSCHICK,MORITZ* - SALZBURGER,WALTER
Convergent evolution in the adaptive radiation of cichlid fishes in Lake Tanganyika, East Africa
- 11:45 064006 WANG,IANJ
The effects of environmental variation and geographic isolation on genetic divergence in *Anolis* lizards

10:30 AM - 12:00 PM 065 Contributed Papers**Oklahoma C*****Diversification - Marine -- Chair: Luis Hurtado***

- 10:30 065001 HURTADO, LUIS* - LEE, EUNJUNG - MATEOS, MARIANA
Phylogeographic patterns of two intertidal isopods and the controversial geological history of the Gulf of California-Baja Peninsula region
- 10:45 065002 BIRD, CHRISTOPHER
Effects of genetic diversity on both standardized and unstandardized indices of fixation and genetic differentiation
- 11:00 065003 LINDGREN, A. R.* - PANKEY, M. S. - OAKLEY, T. H.
Identifying morphological and molecular convergence of cephalopod corneas using phylogenetic and transcriptome data
- 11:15 065004 SANTINI, FRANCESCO* - ALFARO, MICHAEL
Are freshwater fish invaders diversifying faster than reef-associated groups? An empirical test using pufferfish (Tetraodontidae)
- 11:30 065005 REVELL, LIAM
Phylogenetic methods for studying the phenotypic axis of adaptive radiation
- 11:45 065006 PARENT, CHRISTINE* - PERES-NETO, PEDRO - LEIBOLD, M. A.
Disentangling the environmental and historical biogeography effects in island species distributions: A metacommunity phylogenetics approach

10:30 AM - 12:00 PM 066 Contributed Papers**Oklahoma D*****Genomics V -- Chair: Zachary Cheviron***

- 10:30 066001 CHEVIRON, ZACHARY* - BACHMAN, G. C. - STORZ, J. F.
Evolutionary and functional genomics of high-altitude adaptation in deer mice (*Peromyscus maniculatus*)
- 10:45 066002 HARRIS, STEPHEN EDWARD* - MUNSHI-SOUTH, JASON - OBERGFELL, CRAIG - O'NEILL, RACHEL
Population genomics of urban white-footed mice (*Peromyscus leucopus*) in NYC
- 11:00 066003 MARRA, NICHOLAS* - ROMERO, ANDREA - WASER, PETER - DEWOODY, J. ANDREW
Pyrosequencing of the kidney transcriptome in heteromyid rodents to identify genes underlying osmoregulation
- 11:15 066004 DUMONT, BETH - PAYSEUR, BRET*
Genetic analysis of genome-scale recombination rate evolution in house mice
- 11:30 066005 HOHENLOHE, PAUL* - BASSHAM, SUSIE - CRESKO, BILL
Genomic architecture of rapid parallel adaptation in threespine stickleback

11:45 066006 FUJITA, MATTHEW* - EDWARDS, SCOTT - PONTING, CHRIS
Unexpected homogeneity in GC content and divergent isochore structure in the *Anolis* lizard genome

1:20 PM - 5:00 PM Sym6 Symposium Oklahoma E
ASN Vice Presidential Symposium: A Critical Look at Reciprocity in Ecology & Evolution -- Chair: David Reznick

- 1:20 Sym62001 REZNICK, DAVID
Introduction to the Symposium
- 1:30 Sym62002 TRAVIS, JOSEPH* - LEIPS, JEFF
Evolution in population parameters: comparing genetic and environmental effects on numerical dynamics
- 2:00 Sym62003 KENNEDY, MARTIN
Feedbacks between life and the biosphere, fundamental geochemical processes of Earth created by and allowing metazoan life
- 2:30 Sym62004 ESTES, JAMES
Consumer-induced effects by large animals on the fabric of nature
- 3:00 Break
- 3:30 Sym62006 FERRIERE, REGIS
Eco-evolutionary dynamics: Theory and models
- 4:00 Sym62007 KOELLE, KATIA* - RATMANN, OLIVER - RASMUSSEN, DAVID - PASOUR, VIRGINIA - MATTINGLY, JONATHAN
A theoretical framework for understanding the eco-evolutionary dynamics of antigenically variable RNA viruses
- 4:30 Sym62008 JOHNSON, MARC
Exploring the interplay between ecology and evolution of plant-herbivore interactions

1:30 PM - 3:00 PM 067 Contributed Papers University B
Molecular Basis of Adaptation -- Chair: David Remington

- 1:30 067001 REMINGTON, DAVID* - LEINONEN, PÄIVI H - SAVOLAINEN, OUTI
Genetic architecture and mechanisms of resource allocation in *Arabidopsis lyrata* in contrasting environments
- 1:45 067002 BLACKMAN, BENJAMIN* - FLAGEL, LEX - FRIEDMAN, JANNICE - NAKAGMI, PETER - SHENG, CALVIN - KELLY, JOHN - WILLIS, JOHN
Rapid QTL mapping of locally adaptive traits by bulk segregant analysis in *Mimulus*

- 2:00 067003 BARSHIS, DANIEL* - OLIVER, THOMAS - LADNER, JASON - PALUMBI, STEPHEN
Linking environment, to genotype, to expression phenotype, through next-generation transcriptome sequencing of a reef-building coral from Ofu, American Samoa
- 2:15 067004 PESPENI, M. H.* - PALUMBI, STEPHEN
Selection without clines: Molecular signatures of adaptation in the highly dispersing purple sea urchin, *Strongylocentrotus purpuratus*
- 2:30 067005 BURTON, RONALD* - BARRETO, FELIPE - SCHOVILLE, SEAN - MOY, GARY
The molecular basis of local adaptation: Transcriptome responses to thermal stress in populations of the copepod *Tigriopus californicus*
- 2:45 067006 AHERN, JEFFREY* - WHITNEY, KENNETH
Ecological factors associated with the maintenance of a defensive chemical polymorphism in *Xanthium strumarium*

1:30 PM - 3:00 PM 068 Contributed Papers University A
Sexual Selection - Speciation -- Chair: Jessica Ward

- 1:30 068001 WARD, JESSICA* - BLUM, M. J.
Effects of endocrine disruption on communication and reproductive isolation in freshwater fishes
- 1:45 068002 DANLEY, PATRICK D
Oligogenic basis of rapidly evolving reproductive coloration in Lake Malawi's cichlid fish
- 2:00 068003 BASTIAANS, ELIZABETH* - SINERVO, BARRY - MÉNDEZ DE LA CRUZ, FAUSTO
Sexual signal variation within and between populations of an incipiently speciating lizard
- 2:15 068004 OH, KEVIN* - SHAW, KERRY
Contrasting patterns of multivariate sexual selection in a rapidly-speciating cricket
- 2:30 068005 VEEN, THOR* - VANDOORN, GERRIT SANDER
Speciation through sensory drive

1:30 PM - 3:00 PM 069 Contributed Papers Oklahoma A
Phylogenetic Methods IV -- Chair: R. W. Thacker

- 1:30 069001 SANDERSON, MICHAEL* - McMAHON, MICHELLE - STEEL, MIKE
Terraces in phylogenetic tree space
- 1:45 069002 DAVIS, MATTHEW* - MIDFORD, PETER - MADDISON, WAYNE
Exploring power and parameter estimation of the BiSSE method

- 2:00 069003 HEATH, TRACY* - HOLDER, MARK - HUELSENBECK, JOHN
Estimating lineage-specific substitution rates under a Dirichlet process prior
- 2:15 069004 HÖHNA, SEBASTIAN
Burnin estimation and convergence assessment with RevBayes
- 2:30 069005 EYTAN, RON* - HASTINGS, PHILIP - HELLBERG, MICHAEL
The performance of Bayesian phylogenetic inference under extreme substitution rate variation: effects on concatenated and species tree analyses
- 2:45 069006 MORGAN, CLAIRE* - O'CONNELL, MARY
Mammalian phylogeny and evolution: Heterogeneous modelling approach

1:30 PM - 3:00 PM 070 Contributed Papers Oklahoma B
Diversification - Arthropods -- Chair: Julie Urban

- 1:30 070001 URBAN, JULIE* - CRYAN, JASON
Evidence for co-diversification of planthoppers (Hemiptera: Fulgoroidea) with four distinct endosymbiotic bacteria representing diverse bacterial phyla (Bacteroidetes, Betaproteobacteria, and Gammaproteobacteria)
- 1:45 070002 PRICE, BENJAMIN* - DE MOOR, FERDINAND - VILLET, MARTIN
Molecules and morphology combine to reveal surprising diversity in the ancient Afrotropical Megaloptera
- 2:00 070003 HILL, KATHY* - MARSHALL, DAVID - SIMON, CHRIS
A phylogeny of the dog day cicadas of North America (Hemiptera: Cicadidae: *Tibicen*)
- 2:15 070004 EVANGELISTA, OLIVIA* - CRYAN, JASON - SAKAKIBARA, ALBINO
A phylogeny of the treehopper subfamily Heteronotinae (Insecta: Hemiptera: Membracidae) reveals lineage specific trends in extreme morphological plasticity
- 2:30 070005 GDANETZ, KRISTI* - GRUWELL, MATTHEW
Investigating the effects of cryptic diversity and speciation in the armored scale insect *Chionaspis pinifoliae* in their primary endosymbiont *Uzinura diaspidicola*.
- 2:45 070006 MARSHALL, DAVID* - HILL, KATHY - SIMON, CHRIS
Relaxed-molecular-clock dating when fossils are few: Australasian origin, rapid diversification and global expansion of a large cicada tribe

1:30 PM - 3:00 PM 071 Contributed Papers Oklahoma C
Molecular Population Genetics -- Chair: Ryan Haasl

- 1:30 071001 HAASL, RYAN* - WEBER, JAMES - PAYSEUR, BRET
Characterizing natural selection at microsatellites

- 1:45 071002 RAND, DAVID
Phenotypic McDonald-Kreitman tests of mitochondrial genotypes reveal neutral divergence and non-neutral polymorphism for life history and fitness traits in *Drosophila*
- 2:00 071003 TURNER, THOMAS* - STEWART, ANDREW - FIELDS, ANDREW - TARONE, AARON
Using population-based resequencing of artificially selected *Drosophila melanogaster* populations to determine the genetic basis of quantitative traits: data and prospects
- 2:15 071004 CATALAN, ANA* - MÜLLER, LENA - PARSCH, JOHN
Sequence and expression divergence of the *foraging* gene between African and European populations of *Drosophila melanogaster*
- 2:30 071005 BRADMAN, HELEN* - GREWE, PETER - APPLETON, BELINDA
Assessment of genetic markers and their analysis in population genetics of swordfish
- 2:45 071006 JIANG, QI* - WANG, ZHIQUAN - MOORE, STEPHEN - YANG, RONG-CAI
Revealing genome-wide zygotic disequilibrium in a bovine composite population

1:30 PM - 3:00 PM 072 Contributed Papers Oklahoma D
Protein Evolution -- Chair: Deborah Triant

- 1:30 072001 TRIANT, DEBORAH* - PEARSON, WILLIAM
Evolution of partial domains in proteins
- 1:45 072002 QIAN, WENFENG* - ZHANG, JIANZHI
Measuring the evolutionary rate of protein function
- 2:00 072003 LIMA, THIAGO* - MCCARTNEY, MICHAEL
Positive selection on M3 lysin, a candidate gamete recognition gene in the *Mytilus edulis* species complex
- 2:15 072004 SERB, JEANNE* - KRAUSE, ANITA - PAIRETT, AUTUM
Patterns of molecular evolution of the visual proteins in scallops: duplication, divergence and convergence
- 2:30 072005 BADALUCCO, LAURA - NATARAJAN, CHANDRASEKHAR - MORIYAMA, HIDEAKI*
Interactions between host and virus: dUTPase from *Chlorella* and its viruses
- 2:45 072006 KELLEHER, ERINS* - BARBASH, DANIELA
Rapid evolution of piRNA effector proteins is associated with piRNA pathway dysfunction and transposable element derepression in *Drosophila* interspecific hybrids

3:30 PM - 5:00 PM 073 Contributed Papers University B
Speciation via Adaptation -- Chair: Daniel Ortiz-Barrientos

- 3:30 073001 ORTIZ-BARRIENTOS, DANIEL
Speciation driven by natural selection in an Australian daisy

- 3:45 073002 RIESCH, RÜDIGER* - PLATH, MARTIN - SCHLUPP, INGO
Speciation in subterranean habitats: experimental evidence that permanent darkness promotes reproductive isolation
- 4:00 073003 TOBLER, MICHAEL
Adaptation and speciation in extreme environments: the case of sulfide spring fish
- 4:15 073004 HARMON, LUKE* - SVANBÄCK, RICHARD
Speciation along genetic lines of least resistance
- 4:30 073005 PAPADOPOULOS, ANTHONY* - RICE, SEAN
Local adaptation with stochastic habitat selection

3:30 PM - 5:00 PM 074 Contributed Papers University A
Sexual Selection & Hybridization -- Chair: Gil Rosenthal

- 3:30 074001 ROSENTHAL, GIL* - CULUMBER, ZACHARY
Mate choice and the evolutionary fate of natural hybrids
- 3:45 074002 WILLIS, P.M.* - ROSENTHAL, G. G. - RYAN, M.J.
The influence of social experience on conspecific mate preference in female swordtail fish (*Xiphophorus birchmanni*)
- 4:00 074003 CUI, RONGFENG* - ROSENTHAL, GIL
Early learning and mechanisms of conspecific mate preference in a swordtail fish *Xiphophorus malinche* (Teleostei, Poeciliidae)
- 4:15 074004 JOHNSON, JAMES* - ROSENTHAL, GIL
Sexual display traits, swimming performance, and natural hybridization in swordtail fishes (*Xiphophorus*)

3:30 PM - 5:00 PM 075 Contributed Papers Oklahoma A
Phylogenetic Methods V -- Chair: Marc Lajeunesse

- 3:30 075001 LAJEUNESSE, MARC
When to expect phylogenetic bias in the meta-analysis of published research
- 3:45 075002 ZAPATA, FELIPE* - JIMÉNEZ, IVÁN
A nontree-based method for species delimitation: Inferring gaps in morphology across geography
- 4:00 075003 BOETTIGER, CARL
A new phylogenetic comparative method to estimate key evolutionary transitions involving a release of constraint
- 4:15 075004 WU, STEVEN - KOELLE, KATIA - RODRIGO, ALLEN*
Coalescent entanglement: spooky relations from a distance

- 4:30 075005 STOLTZFUS,ARLIN* -NORRIS,RYAN W.
The causes of evolutionary transition:transversion bias
- 4:45 075006 BROWN,JEREMY* -SCADUTO,DIANE -ZWICKL,DERRICK -HAALAND,WADE -
HILLIS,DAVID -METZKER,MICHAEL
Phylogenetic inference of infectious disease sources

3:30 PM - 5:00 PM 076 Contributed Papers Oklahoma B
Population Genetics & Phylogeography -- Chair: Clemens Küpper

- 3:30 076001 KÜPPER,CLEMENS* -EDWARDS,SCOTT -KOSZTOLÁNYI,ANDRAS -BURKE,TERRY
-SZÉKELY,TAMAS
Panmixia in a polyandrous shorebird the Kentish plover *Charadrius alexandrinus*
- 3:45 076002 HUNG,CHIH-MING* -ZINK,ROBERT
Detecting bottleneck and selective sweeps from the mtDNA of Taiga Flycatcher (*Ficedula albicilla*)
- 4:00 076003 PALOPOLI,M.F.* -MINOT,S. -ENDRIZZI,J. -PEI,D. -SATTERLY,A. -SANCHEZ,N. -
TRA,V.
Molecular population genetics of human follicle mites
- 4:15 076004 MARTINEZ-RODRIGUEZ,PALOMA* -BELLASOMBRÍA,JOSE
Wolbachia infection in a *Chorthippus parallelus* hybrid zone
- 4:30 076005 RAGHWANI,JAYNA* -RAMBAUT,ANDREW -HOLMES,EDWARD -HANG,VUT -
HIEN,TRANT -FARRAR,JEREMY -WILLS,BRIDGET -LENNON,NIALL -BIRREN,
BRUCE -HENN,MATTHEW -SIMMONS,CAMERON
The spatial and temporal dynamics of endemic dengue in Southeast Asia

3:30 PM - 5:00 PM 077 Contributed Papers Oklahoma D
Gene Expression -- Chair: Albert Erives

- 3:30 077001 ERIVES,ALBERT
Transcriptional arithmetic during gene regulatory evolution
- 3:45 077002 NOH,SUEGENE* -MARSHALL,JEREMY
Molecular evolution of male-biased genes during lineage sorting in *Allonemobius* crickets
- 4:00 077003 YOKOYAMA,KEN* -POLLOCK,D.D.
Convergent co-evolution of transcription factor SP1 and its binding sites
- 4:15 077004 BRETTNER,LEANDRA* -MASEL,JOANNA
Homo-oligomerization is used to mitigate the effects of expression noise
- 4:30 077005 PLATT,ALEXANDER
(Theoretical) relative stability of metabolic and regulatory networks

3:30 PM - 5:00 PM 096 Contributed Papers
Experimental Evolution I -- Chair: C. F. Baer

Oklahoma C

- 3:30 096001 MATSUBA, CHIKAKO - BAER, C. F.*
The mutational variance for mutational variance in the nematode *Caenorhabditis elegans*
- 3:45 096002 XIE, JIALEI* - TINER, BETHANY - SILVA, NADISHA - GUENTHER, LACIE - MATEOS, MARIANA
Defensive mutualism: The effects of *Spiroplasma* and *Wolbachia* on *Drosophila* survival upon attack by two parasitoid wasps
- 4:00 096003 BRUSINI, JEREMIE* - PATEL, MOHAMMED - SYLVESTRE, LYVIE-SARA - VASQUEZ, SEBASTIAN - WANG, YILIN - MATOS, LUIS F. - WAYNE, MARTAL.
Artificial selection on Sigma virus titer and correlated response of virulence
- 4:15 096004 GENTILE, CHRISTOPHER* - SNIEGOWSKI, PAUL
Mutation rate evolution and extinction in asexual populations
- 4:30 096005 RAYNES, YEVGENIY* - GAZZARA, MATTHEW - SNIEGOWSKI, PAUL
Contrasting dynamics of a costly mutator allele in asexual populations of different size
- 4:45 096006 STUART, YOEL* - CAMPBELL, TODD - LOSOS, JONATHAN
Rapid, replicated character displacement in small-island populations of *Anolis carolinensis* following invasion by a congeneric competitor

5:30 PM - 6:30 PM L1 Special Lecture
ASN Presidential Address

Oklahoma E

- 5:30 L1001 RICKLEFS, R.E.
My life as a naturalist
-

- P2001 NORRIS, RYAN* - STROPE, CORY - STOLTZFUS, ARLIN
A novel approach to incorporating fossil discovery bias in molecular clock calibration
- P2002 AKANNI, WASIU* - PISANI, DAVIDE
A comparison of ML and MRP supertrees
- P2003 AKANNI, WASIU* - PISANI, DAVIDE - FOSTER, PETER
A comparison of maximum likelihood and matrix representation with parsimony supertrees
- P2004 CAMARGO, ARLEY - AVILA, LUCIANO - MORANDO, MARIANA - SITES, JR., JACK*
Accuracy and precision of species trees: an empirical evaluation of performance in lizards of the *Liolaemus darwini* group (Squamata: Liolaemidae) under varying sub-sampling designs
- P2005 ETIENNE, RAMPAL* - JAMES, ROSINDELL
Prolonging the past counteracts the pull of the present: protracted speciation can explain observed slowdowns in diversification
- P2006 RODRIGUE, NICOLAS* - ARIS-BROSOU, STEPHANE
Computing Bayes factors with data-augmentation-based thermodynamic integration
- P2007 CARLSON, BRIAN* - POTTER, BETH
Determining the biodiversity of bacteria isolated from the eggs of House Wren songbirds
- P2008 STEELMAN, ERIC* - SHAFFER, JULIE - PLANTZ, BRADLEY - SIMON, DAWN
Microbial composition of the Nebraska Sandhills alkaline lake ecosystem
- P2009 POST, JAICEE* - WEST, JOHN - BHATTACHARYA, DEBASHISH - YOON, HWAN SU - SIMON, DAWN
Degeneration of an ancient red algal plastid group II intron
- P2010 CARSKADDON, JILL - SPANGLER, SARA - RICHARDS, TAMARA - FISHER, AMANDA* - DENTON, AMY - KELCHNER, SCOT
Three introns corroborate a first estimate of bamboo chloroplast phylogeny
- P2011 MAYFIELD, DUSTIN* - SMELSER, WOODSON - NEWTON, KATHLEEN - PIRES, J. CHRIS
Organelle genome sequence assembly of maize lines and grass relatives using Illumina sequence data
- P2012 PARKER, KENNY* - MOTLEY, TIMOTHY
Divergence time estimation of *Kadua* (Rubiaceae), evolution on the Hawaiian hotspot
- P2013 FILIMBAN, FATENZUBAIR
Systematics and biogeography of *Senna* (Leguminosae) in the Arabian Peninsula

- P2014 BEARD, KRISTIN* - LANE, T. - BURGOS, N. - LAWTON-RAUH, A.
Total-evidence species phylogeny for *Amaranthus*: a framework for investigating adaptive evolution to herbicides and crop evolution
- P2015 THACKER, R.W.* - BANGALORE, P. - DIAZ, M. C. - HILL, A. - HILL, M. - LAVROV, D. - LOPEZ, J. - POMPONI, S. - REDMOND, N. - COLLINS, A. G.
Integrative approaches for reconstructing the Porifera Tree of Life (PorToL)
- P2016 SÁNCHEZ, JUAN* - BRUGLER, MERCER - MILLER, KAREN - UMAÑA, CARLOS - OPRESKO, DENNIS
What ITS2 can tell us about black coral phylogenetics?
- P2017 LEE, EUN JUNG* - MATEOS, MARIANA - HURTADO, LUIS
Phylogeography of supralittoral intertidal *Tylos* isopods in the Pacific region between central Mexico and southern California
- P2018 BELL, KAYLA* - BUCKLEY, LARRY
Phylogenetic relationships within the order Isopoda
- P2019 THOMSON, ROBIN* - HOLZENTHAL, RALPH - KJER, KARL
Testing the monophyly of the microcaddisfly family Ptilocolepidae (Trichoptera)
- P2020 HUSEMANN, MARTIN* - NAMKUNG, SUK - DANLEY, PATRICK
Intercontinental relationships of band-winged grasshoppers as revealed by mitochondrial and nuclear DNA sequence
- P2021 MIYA, MASAKI
The mitogenomic supermatrices to resolve Cypriniformes Tree of Life: An empirical approach based on 472 complete and 2171 partial mtDNA sequences
- P2022 HAYES, MALORIE* - PILLER, KYLE
Gene trees, species trees, and molecular dating of the tribe Chapalichthyini (Teleostei: Goodeidae)
- P2023 PALACIOS, MAURA* - MEREDITH, ROBERT - REZNICK, DAVID - MATEOS, MARIANA
Multilocus phylogeny and biogeography of Mexican freshwater fishes (*Poeciliopsis*: Poeciliidae)
- P2024 KLYMUS, KATY* - GERHARDT, CARL
Investigating phylogenetic relationships within a possible cryptic species complex, the canyon treefrog, *Hyla arenicolor*, with AFLP and sequence data
- P2025 MYERS, EDWARD* - PYRON, ALEX - BURBRINK, FRANK
Are morphological and ecological patterns of diversification linked in New World Natricine snakes?
- P2026 WALLACE, SARAH* - MORRIS-POCOCK, JAMES - GONZÁLEZ-SOLÍS, JACOB - FRIESEN, VICKI
A species tree for the Hydrobatinae (Aves: Procellariiformes): phylogenetic evidence for sympatric speciation

- P2027 POORLIN RAMAKODI, MEGANATHAN* - MCCULLOCH, EVE - STEVENS, RICHARD - RAY, DAVID
Codon usage bias in the mitochondrial genomes of Chiroptera
- P2028 LEE, YUN-SUN - MIN, MI-SOOK - VOLOSHINA, INNA - MYSLENKOV, ALEXANDER - OH, JANG-GEUN - MARKOV, NICKOLAY - ARGUNOV, ALEXANDER - LEE, HANG - KIM, KYUNG-SEOK*
Evolutionary status and extent of genetic diversity of Siberian roe deer in Northern Eurasia
- P2029 MALANEY, JASON* - COOK, JOE
Phylogeography of *Zapus princeps*
- P2030 SAWYER, YADEEH* - COOK, JOE
Living on the edge and island biogeography in the Alexander Archipelago of Alaska
- P2031 DEDRICK, SANDRA* - BUCKLEY, LARRY
A phylogeographic analysis of the Mexican black iguana, *Ctenosaura pectinata*: comparing the genetic divergence found within mitochondrial and nuclear DNA
- P2032 SPARLING, KRISTEN - PADULA, VERONICA - LOPEZ, J. ANDRES*
The role of the Brooks Range in genetic differentiation among aggregations of *Coregonus nasus* (Broad whitefish)
- P2033 BURFORD, M. O.* - BERNARDI, G. - CARR, M. H.
The genetic structure of blue rockfish (*Sebastes mystinus*) reveals temporal and geographic variation between cryptic species, and little evidence of first-generation hybrids in sympatric regions
- P2034 MOODY, KRISTINE, N.* - KAWANO, S. M. - MAIE, T. K. - BLOB, R. W. - SCHOENFUSS, H. L. - BLUM, M. J. - PTACEK, M. B.
Morphological and genetic divergence in the waterfall-climbing Hawaiian goby, *Sicyopterus stimpsoni*
- P2035 HUSEMANN, MARTIN* - RAY, JESSE - KING, RYAN - DANLEY, PATRICK
Comparative phylogeography of stream fish native to central Texas
- P2036 LIU, SHUANG* - MATEOS, MARIANA - HURTADO, LUIS
Phylogeography of intertidal *Excirolana* isopods in Gulf of California
- P2037 DIMOND, KRISTEN - DOERDER, PAUL - ZUFALL, REBECCA*
Population genetics and phylogeography of the model ciliate *Tetrahymena thermophila*
- P2038 CAMPBELL, R. B.
Fixation of a gene by drift is unlikely in large populations, neither identity by descent nor identity by type
- P2039 JURIC, IVAN* - GAVRILETS, SERGEY
Estimating migration rates and the strength of selection from DNA data

- P2040 GRAY, MELISSA* - RYAN, PETER - SEARLE, JEREMY - PAYSEUR, BRET
Inferring the demographic history of an Island population of house mouse with extreme body size evolution
- P2041 PIERCE, NTESSA
HRM genotyping of *Tigriopus californicus* heat stress genes
- P2042 HILDEBRAND, KATIE* - BEHR, JONAS - DREWE, PHILIPP - GAN, XIANGCHAO - KAHLES, ANDRE - LYNGSOE, RUNE - OSBORNE, EDWARD - SCHULTHEISS, SEBASTIAN - SREEDHARAN, VIPINT - STEFFEN, JOSHUA - STEGLE, OLIVER - CLARK, RICHARD - KOVER, PAULA - MOTT, RICHARD - RATSCH, GUNNAR - TOOMAJIAN, CHRISTOPHER
Patterns of genome and transcriptome variation in *Arabidopsis thaliana*
- P2043 MCCAULEY, ROSS* - CHRISTIE, BRENNAN - IRELAND, ERIK - LANDERS, RAE - NICHOLS, HALEY - SCHENDEL, MATHEW
Geographic determination of gene flow in *Quercus* of the Four Corners Region: a local examination of the *Quercus undulata* complex
- P2044 BACHERT, BETH - SCHWAB, JENNIFER* - COTRONEO, LAURIE - KLIMAN, RICHARD
The relationship of codon bias and gene expression in *Cryptococcus neoformans*
- P2045 KLECHA, JENNIFER* - COOMBE, SANDRA - COTRONEO, LAURIE - KLIMAN, RICHARD
Population genomic analysis of natural selection on codon usage in *Cryptococcus neoformans*
- P2046 OZA, ANUJA* - TUNSTALL, TATE - STAJICH, JASON - MORITZ, CRAIG
Investigation of the diversity and pathogenicity of *Batrachochytrium dendrobatidis* in declining and non-declining populations through time
- P2047 TOOMAJIAN, CHRISTOPHER
Genome-wide assessment of population structure and linkage disequilibrium in the *Fusarium graminearum* species clade through next-gen sequencing
- P2048 LUO, HAIWEI* - ARENAS, MIGUEL - TANG, JIJUN - POSADA, DAVID - MORAN, MARY ANN - HUGHES, AUSTIN
Evolutionary patterns in population history of marine bacteria
- P2049 CARDENAS, LEYLA
Interaction of planktonic larval duration and coastal topography in *Concholepas concholepas*, a marine mollusk with a high dispersal potential
- P2050 TRAN, CHRISTINA* - GUO, WEIXIA - STEPIEN, COURTNEY - SEQUEIRA, ANDREA
Detection of the effects of habitat fragmentation on the genetic variability and structure of endemic weevil populations on Northern Isabela island, Galápagos
- P2051 WALLACE, ANDRE - SCHAEFFER, STEPHEN*
Evolutionary genomics of gene rearrangements in populations of *Drosophila pseudoobscura*
- P2052 SEBASTIAN, MATHEW* - DUDYCHA, JEFFRY
Population genetic structure of *Daphnia obtusa* in relation to flooding rate at Congaree National Park

- P2053 MILES, LINDSAY* - ZIEMBA, ROBERT - VERRELLI, BRIAN - JOHNSON, J. CHADWICK
A population genetic approach to investigate effects of urbanization and habitat fragmentation on the Western black widow spider, *Latrodectus hesperus*
- P2054 NTIE, STEPHAN* - JOHNSTON, ANNE - ANTHONY, NICOLA
Do rivers constitute effective barriers to gene flow among central African duikers (genus *Cephalophus*)?
- P2055 LARUE, ELIZABETH* - RUETZ III, CARL - STACEY, MICHAEL - THUM, RYAN
Population genetic structure of the round goby in Lake Michigan: implications for dispersal of invasive species
- P2056 JOHNS, MICHAEL* - SCOTT, JASON - DUVERNELL, DAVID - KREISER, BRIAN - SCHAEFER, JACOB
Within-drainage comparison of genetic structure for two topminnow species, *Fundulus notatus* and *F. olivaceus*
- P2057 CAMARGO, ARLEY - AVILA, LUCIANO - MORANDO, MARIANA - SITES, JR., JACK*
Species delimitation with ABC and other coalescent-based methods in lizards of the *Liolaemus darwini* complex (Squamata: Liolaemidae).
- P2058 ANDOLFATTO, PETER* - DAVISON, DAN - EREZYILMAZ, DENIZ - HU, TINA - MAST, JOSH - SUNAYAMA-MORITA, T. - STERN, D. L.
MSG: Multiplexed shotgun genotyping for rapid and efficient genetic mapping.
- P2059 IWATA, AIKO* - RADKE, BRITTANY - FINDLEY, SETH - SCHMUTZ, JEREMY - LI, YU-PENG - ABERNATHY, BRIAN - GEFFROY, VALÉRIE - JACKSON, SCOTT
Establishing a karyotype map using fluorescence *in situ* hybridization for genome evolution study in common bean
- P2060 BLACKMON, HEATH* - DEMUTH, JEFF
Karyotype evolution in Coleoptera
- P2061 KASS, DAVID* - JANOUŠEK, VÁCLAV - WANG, LIUYANG - MACHOLÁN, MILOŠ - PIÁLEK, JAROSLAV - TUCKER, PRISCILLA
Detailed analysis of a chromosomal region in the house mouse, *Mus musculus*, correlated with reproductive isolation
- P2062 SPRING, KEVIN* - PHAM, STEPHANIE - ZUFALL, REBECCA
Stochastic distribution of somatic chromosomes in *Chilodonella uncinata*
- P2063 INDORF, JANE* - HURT, CARLA
Estimation of the nuclear mutation rate across the genome of snapping shrimp (*Alpheus*) using next-generation sequencing
- P2064 ANDREW, J.A.* - BEAN, L. C. - BAER, C. F. - JOYNER-MATOS, J.
Relationship between mutation load and stress resistance in *C. elegans*
- P2065 WANG, YINHUA* - COOPER, TIM
Interactions between beneficial mutations and their genetic backgrounds

- P2066 WOODRUFF, RONNY
An extreme test of mutational meltdown in small populations
- P2067 WANG, RICHARD* - PAYSEUR, BRET
Towards a phylogenetic test of the Dobzhansky-Muller model of speciation
- P2068 WATSON, ERIC* - DEMUTH, JEFF
The expression of Haldane's rule in marsupials
- P2069 ROCCAFORTE, KATHY* - RUSSO, SABRINA - PILSON, DIANA
Evaluating mechanisms of reproductive isolation between diploid *Erythronium mesochoreum* (Liliaceae) and its tetraploid congener *E. albidum*
- P2070 TAYLOR, SUNNI* - MARTIN, NOLAND
Homoploid hybrid speciation in Louisiana Iris
- P2071 LAFLEUR, TORI* - TEETER, KATHERINE
Investigating DNA methylation patterns associated with genomic imprinting in *Mus* hybrids
- P2072 BAUMSTEIGER, JASON* - KINZIGER, ANDREW - AGUILAR, ANDRES
Analysis of cryptic lineages within a morphologically indeterminate clade of freshwater sculpin (genus *Cottus*) along the west coast of North America
- P2073 WILLIS, STUART* - FARIAS, IZENI - ORTI, GUILLERMO
Discriminating ancient hybridization and ancestral polymorphism using coalescent methods in Amazonian peacock cichlids
- P2074 LOPEZARRIAZA, JOSE* - MUELLER, RACHEL
Does epigenetic divergence scale with genetic distance during species formation?
- P2075 MORII, YUTA* - YOKOYAMA, JUN - KAWATA, MASAKADO - DAVISON, ANGUS - CHIBA, SATOSHI
Extreme morphological change: an example of two land snails in Hokkaido, Japan
- P2076 LOWE, BEN* - KOZAK, KENNETH
Molecular characterization of hybrid zones between Southern Appalachian *Plethodon*
- P2077 SCOTT, JASON* - JOHNS, MICHAEL - DUVERNELL, DAVID - KREISER, BRIAN - SCHAEFER, JACOB
Hybridization and introgression in contact zones between two topminnow species, *Fundulus notatus* and *F. olivaceus*
- P2078 LIM, MARISA
Tracking a contact zone through time: A molecular investigation of the California ground squirrel (*Otospermophilus beecheyi*)
- P2079 SONG, YING* - ENDEPOLS, S. - KLEMANN, N. - RICHTER, D. - MATUSCHKA, F. - SHIH, C. - NACHMAN, M. - KOHN, M. H.
Adaptive Introgression of Rodent Poison Resistance Between Mice

- P2080 BARNES, PHILLIPT.* - ARENSON, PATRICIA K. - SAMBOY, JAZLEN R. - YAM, KYLE E. S.
Partial behavioral isolation between DDT resistant populations and their unselected control populations under long-term selection and isolation in *Drosophila melanogaster*
- P2081 WASSIM, NAHLA MOHAMED* - SOLIMAN, BELAL AHMED - EL YAMANY, DOAA FARAG
Rapid assay to distinguish the two Egyptian *Aedes (Ochlerotatus) caspius* (Pallas) forms using acetylcholine cholinesterase gene
- P2082 OLOFSSON, HELEN - FRAME, ALICIAM - SERVEDIO, MARIAR*
Can reinforcement occur with a learned trait?
- P2083 SCORDATO, ELIZABETH
Geographical variation in the targets of sexual selection in the Greenish Warbler ring species
- P2084 HVALA, JOHN* - WHITE, MICHAEL - WAGNER, JENNIFER - DUMONT, BETH - PAYSEUR, BRET
Sex ratio distortion in hybrids between sub-species of house mice
- P2085 MYERS, SHELLEY* - BUCKLEY, THOMAS - HOLWELL, GREGORY
The Evolution of sticks: Clasper quantification and gene flow estimates across a hybrid zone
- P2086 KIM, HYUNCHUL* - TOMITA, MASARU
Protein evolvability is controlled by transcription-associated mutagenesis responding to the degree of nutritional stress
- P2087 MESLIN, CAMILLE* - MUGNIER, SYLVIE - PASCAL, GÉRALDINE - CALLEBAUT, ISABELLE - GOUDET, GHYLÈNE - MONGET, PHILIPPE
An evolutionary signature of the sperm-egg interaction in Vertebrates
- P2088 YAMADA, KELSEY* - WAID, BRITAIN - CHO, SOOCHIN
Cloning, expression, and functional characterization of the human non-canonical ribonuclease A protein
- P2089 HENSCHEN, AMBERLEIGH* - CHO, SOOCHIN
Evolution Of The Hominoid Alpha-Amylase Gene Family
- P2090 NATARAJAN, CHANDRASEKHAR* - PROJECTO-GARCIA, JOANA - CHEVIRON, ZACHARY - FAGO, ANGELA - WEBER, ROY - MORIYAMA, HIDEAKI - STORZ, JAY
A protein engineering approach to investigate the molecular adaptation of hemoglobin
- P2091 GRISPO, MICHAEL* - NATARAJAN, CHANDRASEKHAR - MORIYAMA, HIDEAKI - STORZ, JAY
Evolution of the avian alpha-globin gene family and the structural basis of hemoglobin A/D isoform differentiation
- P2092 WOO, ANGELICA* - BROCKHOUSE, CHARLES - CHO, SOOCHIN
Characterization and expression of *Simulium vittatum* (black fly) silk genes: An examination of silk genetics and evolution

- P2093 DUEÑAS, LUISA* - SÁNCHEZ, JUAN
Additive polymorphisms suggest reticulate evolution in deep-sea bamboo corals
- P2094 RICE, STANLEY* - CORBETT, ERICA
Tannin concentration in post oak leaves in Oklahoma: Is there genetic variation for an evolutionary response to climate change?
- P2095 BYERS, DIANE* - RICHARDSON, JENNIFER - ADAM, GRIFFIN - TODD, PRICE - LINDSAY, MAY
Living in a fragmented landscape: Pollinators and the consequences for reproduction in *Lobelia spicata*
- P2096 MUELLER, ULRICH
A reevaluation of attine ant-microbe co-evolution
- P2097 COLSTON, TIMOTHY* - JACKSON, COLIN
Regional specificity in snake gut microbial community structure: Ecological and phylogenetic implications
- P2098 TUFTS, DANIELLE* - GARDNER, SCOTT
Variation of mammalian parasites from a high altitude habitat in Colorado
- P2099 GLEASON, LANI* - BURTON, RONALD
Contrasting the responses of a nocturnal (*Aplysia vaccaria*) and a diurnal (*Aplysia californica*) sea hare to UV light: Differences in activity patterns, mycosporine-like amino acid absorbance, and photolyase gene E
- P2100 BULFER, HEIDI* - WAGNER, WILLIAM JR.
Effect of diet quality on female repeated mating in the variable field cricket, *Gryllus lineaticeps*
- P2101 LUE, CHIA-HUA* - LEIPS, JEFF - HUGHES, KIMBERLY
Does selection to extend life-span enhance late-age immune response?
- P2102 SHAW, JEFF* - WILSON, LANCE - HARNER, MARY - SIMON, DAWN
Fungal diversity of a cottonwood root system
- P2103 BRANDON, CHRISTOPHER* - DUDYCHA, JEFFRY
Differentially expressed genes between *Daphnia* exposed to two different resource environments
- P2104 LARDIES, MARCO* - ARIAS, MARIA - BACIGALUPE, LEONARDO - POUPIN, MARIA
Heritability of gene expression of *Hsp70* in an insect with complex life-cycle: effect of thermal environment
- P2105 SWENSON, SARAH - SCHARFF, SAMUEL - GRABSKI, KEVIN - HALLMAN, CLAYTON - THOMPSON, JAMES*
Deviations from symmetry: Quantifying the effect of aging and environmental stress
- P2106 SIKKINK, KRISTIN* - CRESKO, BILL
Genotype-by-environment interactions in transcriptional regulation in threespine stickleback
- P2107 ETGES, W.J.* - OLIVEIRA, C.C. - RAJPUROHIT, S. - GIBBS, A. - TROTTER, M. - TULJAPURKAR, S.
Ecological genomics of stage and age specific responses to different host plants in populations of *Drosophila mojavensis*

- P2108 CHEN, XIN* - BURBRINK, FRANK
Rates and patterns of morphological evolution in rapidly diversifying ratsnakes across the globe
- P2109 CHIUCCHI, JAMES - GIBBS, H. LISLE*
Inbreeding, fitness and fatness in historically isolated populations of Eastern Massasauga rattlesnakes (*Sistrurus c. catenatus*).
- P2110 STAYTON, C. TRISTAN
Do turtles with more powerful predators have stronger shells?
- P2111 ATKINSON, E. G.* - ROGERS, J. - CHEVERUD, J.
Quantitative genetics of cortical gyrification in a pedigreed baboon population
- P2112 O'DONNELL, SEAN - CLIFFORD, MARIE* - MOLINA, YAMILE
Constraints and caste differences in brain investment: a comparative analysis in paper wasps
- P2113 LARUE, K. M.* - SUNAYAMA-MORITA, T. - STERN, D. L.
A minimum of four genes control pulse song differences between *D. yakuba* and *D. santomea*
- P2114 CASH, ELIZABETH* - HELMKAMPF, MARTIN - GADAU, JÜRGEN
Uncovering the genetic basis of social insect nestmate recognition: Desaturase gene diversity among seven newly sequenced ant species
- P2115 MASTELLONE-SCHOTTMAN, MICHELA - HIGGINS, LINDEN*
Reconciling conflicting models of male behavior in sexually size dimorphic spiders
- P2116 SMITH, CHUCK* - SCHUETT, GORDON
Male copulation success in a North American pitviper is correlated with spatial parameters and concentrations of plasma testosterone, but not body size
- P2117 GLASTAD, KARL* - GOODISMAN, MICHAEL
Paternity skew in a polyandrous social wasp
- P2118 KRAEMER, ANDREW* - ADAMS, DEAN - KISSNER, JESSICA
Temporal Color Changes in the Red-Backed Salamander While Kept in Captivity
- P2119 BELL, RAYNA* - ZAMUDIO, KELLY
Distribution and characterization of sexual dichromatism in anurans
- P2120 GIERY, SEAN* - LAYMAN, CRAIG - LANGERHANS, R. BRIAN
Effects of anthropogenic estuarine fragmentation on a colorful sexual trait in Bahamas mosquitofish (*Gambusia hubbsi*)
- P2121 SNOWBERG, LISA* - BOLNICK, DANIEL
Nesting habitat contributes to assortative mating by diet in threespine stickleback
- P2122 BUXEL-FLORENZEN, STEFANIE* - SUN, LIXING
Sexy-son or handicap: Testing two mate choice hypotheses using the black field cricket, *Gryllus firmus*
- P2123 ADAMSON, JOEL
Evolution of age-dependent traits under sexual selection by female choice

TUESDAY, JUNE 21

8:00 AM - 12:00 PM Sym7 Symposium Oklahoma E
SSE Symposium: Experimental Evolution: Testing Evolutionary Theory in Real Time -- Chairs: Rhonda Snook; Nick Colegrave

- 8:00 Sym7001 BURCH, CHRISTINE
High frequencies of beneficial mutations support Fisher's Geometric model of adaptation
- 8:30 Sym7002 LOW-DECARIE, ETIENNE* - FUSSMANN, GREGOR - BELL, GRAHAM
Adaptation of microalgae to nutrient fertilization
- 9:00 Sym7003 RUNDLE, HOWARD D* - WONG, ALEX - ARBUTHNOTT, DEVIN
Sexual selection and the purging of deleterious alleles: empirical tests using experimental evolution in *Drosophila melanogaster*
- 9:30 Sym7004 COLLINS, SINEAD
Developing new model systems for experimental evolution
- 10:00 Break
- 10:30 Sym7006 KOVER, PAULA
Experimental evolution in plants: the genetic basis of becoming an early flowerer in different environments
- 11:00 Sym7007 WEDELL, NINA
Sex ratio drive and polyandry
- 11:30 Sym7008 REZNICK, DAVID* - LOPEZ-SEPULCRE, ANDRES
Experimental studies of the interactions between ecology and evolution in natural populations of Trinidadian guppies (*Poecilia reticulata*)

8:30 AM - 10:00 AM 081 Contributed Papers Oklahoma A
Phylogenetics - Fishes I -- Chair: David Duvernell

- 8:30 081001 DUVERNELL, DAVID* - KREISER, BRIAN - SCHAEFER, JACOB
Contrasting evolutionary histories of the two broadly distributed species in the *F. notatus* species complex
- 8:45 081002 KREISER, BRIAN* - DUVERNELL, DAVID - SCHAEFER, JACOB
Phylogeographic analysis of the broad and narrow ranging members of the *Fundulus notatus* species complex
- 9:00 081003 CAMPBELL, MATTHEW* - LOPEZ, J. ANDRES
Phylogeography and population genetics of a Beringian endemic: *Dallia* (Esociformes: Esocidae)

- 9:15 081004 WILCOX, CHRISTIE
Evidence for wide-spread hybridization between two closely related lionfish species
- 9:30 081005 HUSEMANN, MARTIN* - DING, BAOQING - HOWE DANLEY, AIMEE - DANLEY, PATRICK
Population divergence in rock-dwelling cichlids of Lake Malawi
- 9:45 081006 HALAS, DOMINIK
Nuclear introns reveal a complex history of diversification and introgression in the *Etheostoma zonale* species group

8:45 AM - 10:00 AM 078 Contributed Papers
Mating & Parasites -- Chair: Oliver Beckers

University C

- 8:45 078001 BECKERS, OLIVER* - WAGNER, WILLIAM JR.
The effect of fly parasitism on the evolution of reproductive communication in a cricket
- 9:00 078002 MACMANES, MATTHEW
Understanding the relationship between sexual behavior, selection on immunogenes, and vaginal bacteria in peromyscine rodents
- 9:15 078003 MORRAN, LEVI* - SCHMIDT, OLIVIA - LIVELY, CURT
Running with the Red Queen: Host-parasite coevolution selects for biparental sex
- 9:30 078004 VERGARA, DANIELA* - KING, KAYLA - LIVELY, CURT - JOKELA, JUKKA
The fine-scale geographic mosaic of sex and infection within New Zealand lakes
- 9:45 078005 SOPER, DEANNA* - LIVELY, CURT - DELPH, LYNDA
Generation of genetic diversity by reproductive behaviors in the presence of coevolving parasites

8:45 AM - 10:00 AM 080 Contributed Papers
Sexual Selection & Behavior -- Chair: Christopher Cunningham

University A

- 8:45 080001 CUNNINGHAM, CHRISTOPHER* - RUFF, JAMES - CHASE, KEVIN - POTTS, WAYNE - CARRIER, DAVID
Genetic, morphological, and environmental underpinnings of social dominance ability in male house mice
- 9:00 080002 MCCAIN, SHELLY* - SENDELBACH, SARAH - BAKER, JORDAN - DEATON, RAELYNN
Does socioeconomic background influence human mate choice for potential for resources
- 9:15 080003 OUFIERO, CHRISTOPHER* - JUGO, KRISTINE - CHAPPELL, MARK - GARLAND, THEODORE
Does the evolution of a sexually selected trait compromise sprint and endurance performance in *Xiphophorus* swordtails and their close relatives?

- 9:30 080004 OWEN, M.AARON* - ROHRER, KARL - HOWARD, RICHARD
Mate choice for a novel male phenotype in zebrafish (*Danio rerio*)
- 9:45 080005 WESTERMAN, E. L.* - MONTEIRO, A.
Premating experience reverses mating patterns in female butterflies

8:45 AM - 10:00 AM 082 Contributed Papers Oklahoma B
Diversification - Birds I -- Chair: Claire Curry

- 8:45 082001 CURRY, CLAIRE* - PATTEN, MICHAEL
Why songs vary across older and younger regions of a complex avian hybrid zone
- 9:00 082002 MASON, NICHOLAS* - SHULTZ, ALLISON - BURNS, KEVIN
Diversification rates and phenotypic evolution in the neotropical seed-eaters (Genus *Sporophila*)
- 9:15 082003 WHEATCROFT, DAVID* - PRICE, TREVOR
Learning drives heterospecific vocal recognition in avian mobs
- 9:30 082004 MCENTEE, JAY* - BOWIE, RAURICK
A sky island contact zone between sibling sunbird species with highly divergent song
- 9:45 082005 WEIR, JASON* - WHEATCROFT, DAVID - PRICE, TREVOR
Evolution of birdsong frequency is more constrained in the tropics than at higher latitudes

9:00 AM - 10:00 AM 079 Contributed Papers University B
Development and Evolution I -- Chair: Ivan Gomez-Mestre

- 9:00 079001 GOMEZ-MESTRE, IVAN* - KULKARNI, SAURABH - BUCHHOLZ, DANIEL
Phenotypic divergence among spadefoot toad species reflects accommodation of mechanisms underlying developmental plasticity
- 9:15 079002 BAKER, ROBERT* - DIGGLE, PAMELA
Intraspecific variation in *Mimulus guttatus* shoot architecture is caused by heterochronic shifts in flowering and node-specific differences in branch outgrowth
- 9:30 079003 JOHNSON, ADAM* - NAWROCKI, ANNALISE - GLEASON, JENNIFER - CARTWRIGHT, PAULYN
Evolution of taste: Insights from *Nematostella*
- 9:45 079004 KINGSLEY, EVAN* - KOZAK, KRZYSZTOF M - HOEKSTRA, HOPIE
A tale of tails: Evolution and development of the forest deer

9:00 AM - 10:00 AM 083 Contributed Papers**Oklahoma C*****Next-Generation Sequencing -- Chair: Dorothee Huchon***

- 9:00 083001 RUBINSTEIN, NIMROD - FELDSTEIN, TAMAR - DIAMANT, ARIK - HUCHON, DOROTHEE*
Using next-generation sequencing to illuminate the phylogenetic position of Myxozoa
- 9:15 083002 O'NEILL, ERIC* - BULLOCK, TOMMY - SCHWARTZ, RACHEL - WEISROCK, DAVID
Overcoming bioinformatic hurdles in targeted next generation sequence data
- 9:30 083003 STREICHER, J. W.* - CASTOE, TODD - INGRASCI, M. J. - POOLE, A. W. - SMITH, E. N. - POLLOCK, D. D.
Leveraging next-generation sequencing to disentangle species complexes in venomous coral-snakes (*Micrurus*)
- 9:45 083004 WU, STEVEN* - RODRIGO, ALLEN
Inferring evolutionary parameters from next generation sequences using site frequency spectra

10:30 AM - 12:00 PM 084 Contributed Papers**University C*****Pathogens -- Chair: Martine Zilversmit***

- 10:30 084001 ZILVERSMIT, MARTINE* - MCVEAN, GIL - AWADALLA, PHILIP
The impact of recombination and natural selection on the evolution of genome structure in the malaria parasite *Plasmodium falciparum*
- 10:45 084002 MATOS, LUIS* - WAYNE, MARTA
Artificially host shifted rhabdovirus sigma exhibits increased infectivity and virulence
- 11:00 084003 BALTRUS, D. A.* - HOLUB, E. - BISWAS, S. - DANGL, J.
The molecular basis of fine scale host range evolution in *Pseudomonas syringae*
- 11:15 084004 BASHEY, FARRAH* - HAWLENA, HADAS - LIVELY, CURT
Spite and virulence: how within-host competition affects parasite fitness
- 11:30 084005 SACKETT, LOREN* - COLLINGE, SHARON - MARTIN, ANDREW
Recolonization after sylvatic plague increases genetic diversity in prairie dog populations
- 11:45 084006 LEVIN, IRIS* - PARKER, PATRICIA
Population genetics of host-parasite interactions in Galapagos seabirds

10:30 AM - 12:00 PM 085 Contributed Papers
Development and Evolution II -- Chair: Jennifer Anderson

University B

- 10:30 085001 ANDERSON, JENNIFER* - RODRIGUEZ MARI, ADRIANA - POSTLETHWAIT, JOHN
Sex determination and the determination of sex in zebrafish
- 10:45 085002 VALENZUELA, NICOLE* - ADAMS, DEAN
Chromosome number and sex determination co-evolve in turtles during climate change
- 11:00 085003 PAVLICEV, MIHAELA
What does sexual dimorphism have to do with asymmetry? Possibly, everything.
- 11:15 085004 YOUNG, REBECCA* - WAGNER, GUNTER
A *cis*-regulatory mechanism of evolutionary homeosis: the developmental genetics of avian wing digit identity
- 11:30 085005 WATKINS, CHAD* - PIRES DASILVA, ANDRE
The influence of transposable elements within the *Anolis carolinensis* *Hox* cluster
- 11:45 085006 O'BRIEN, KATHERINE* - SCHMIDT, PAULS
Better, Faster, Stronger: Gene and photoperiod mediated plasticity for development time in *D. melanogaster*

10:30 AM - 12:00 PM 086 Contributed Papers
Sexual Selection -- Chair: Reinaldo de Brito

University A

- 10:30 086001 GONÇALVES, VANESSA - SOBRINHO JR., IDERVAL - de BRITO, REINALDO*
Molecular evolution of chorionic genes in fruit flies of the genus *Anastrepha*
- 10:45 086002 GLEASON, JENNIFER* - ZHOU, YIHONG - HACKETT, JENNIFER - GREENFIELD, MICHAEL
Quantitative trait loci for an acoustic signal in the lesser waxmoth, *Achroia grisella*
- 11:00 086003 SPITZE, KEN
Sexual selection in *Daphnia*?
- 11:15 086004 PISCHEDDA, ALISON* - RICE, WILLIAM
How much sexual selection occurs after mating?
- 11:30 086005 BERNIS, CHELSEA
Phenotypic evolution of sexual size and shape dimorphism in bills of hummingbirds
- 11:45 086006 SHULTZ, ALLISON* - BURNS, KEVIN
Male and female plumage evolution in the tanagers: a mosaic of natural and sexual selection

10:30 AM - 12:00 PM 087 Contributed Papers**Oklahoma A*****Phylogenetics - Fishes II -- Chair: Michael E. Alfaro***

- 10:30 087001 ALFARO, MICHAEL* - ROY, KAUSTUV - CHANG, JONATHAN - EASTMAN, JONATHAN - SMITH, STEPHEN - SANTINI, FRANCESCO - BAUM, JULIA - HASTINGS, PHILIP - SIDLAUSKAS, BRIAN
Phylogenetic distribution of commercially exploited fish species: How many times has 'tastiness' evolved?
- 10:45 087002 MCMAHAN, CALEB* - DAVIS, MATTHEW - CHAKRABARTY, PROSANTA
Investigating the tempo of diversification among major cichlid lineages
- 11:00 087003 WILLIS, STUART* - FARIAS, IZENI - ORTI, GUILLERMO
Species tree of my favorite taxon: are my data variable enough? Species-level phylogeny of Neotropical peacock cichlids
- 11:15 087004 HOLLINGSWORTH, PHILLIP* - HULSEY, C. DARRIN
Reconciling gene trees of eastern North American minnows
- 11:30 087005 PILLER, KYLE* - BLOOM, DEVIN
Evolutionary diversification of shape disparity in New World silversides (Atherinopsidae)
- 11:45 087006 BETANCUR-R., RICARDO* - LI, CHENHONG - MUNROE, THOMAS - SMITH, WM. LEO - ORTI, GUILLERMO
The evolutionary origin of flatfish asymmetry revisited: a multi-locus phylogenetic assessment

10:30 AM - 12:00 PM 088 Contributed Papers**Oklahoma B*****Diversification - Birds II -- Chair: V.V. Robin***

- 10:30 088001 ROBIN, V.V.* - POOJA, GUPTA - REDDY, PHD, SUSHMA - SINHA, ANINDYA - RAMAKRISHNAN, UMA
The role of ancient geographical gaps on the evolution of birds on sky islands of the Western Ghats southern India
- 10:45 088002 PEARMAN, PETER* - LAVERGNE, SEBASTIEN - ROQUET RUIZ, CRISTINA - THUILLER, WILFRIED - WÜEST, RAFAEL - ZIMMERMANN, NIKLAUSE
Divergent evolution of the habitat, trophic and climatic niches of western palearctic birds
- 11:00 088003 SMITH, BRIANTILSTON* - AMEI, AMEI - KLICKA, JOHN
Alternating episodes of humid and dry habitat caused speciation during the Great American Biotic Interchange
- 11:15 088004 BLOCK, NICHOLAS* - RAHERILALAO, MARIE JEANNE - GOODMAN, STEVEN - BATES, JOHN - HACKETT, SHANNON
Cryptic species or reticulate evolution? A unique scenario in a passerine bird.

- 11:30 088005 MILLER, E. T.* - RICKLEFS, R. E. - ZANNE, A. E.
Habitat filtering explains much of the variation in Australian honeyeater assemblages
- 11:45 088006 SARI, EHR* - KLOMPEN, H. - PARKER, PATRICIA
Understanding the origin and history of the Galapagos Flycatcher and its parasites

10:30 AM - 12:00 PM 089 Contributed Papers **Oklahoma C**
Genomes & Tree of Life -- Chair: Morgan Vis

- 10:30 089001 VIS, MORGAN* - LAM, DARYL - JOHNSTON, EMILY - SALOMAKI, ERIC
REDToL: Insights into the phylogeny of freshwater rhodophytes
- 10:45 089002 MATASCI, NAIM
The iPlant tree of life project and toolkit: Building a cyberinfrastructure for plant science research
- 11:00 089003 BOUSSAU, BASTIEN* - SZOLLOSI, GERGELY - DURET, LAURENT - MANOLO, GOUY - ERIC, TANNIER - VINCENT, DAUBIN
Whole-genome study of mammalian evolution
- 11:15 089004 KELLER, THOMAS E.* - HEDTKE, SHANNON M - WILKE, CLAUS O.
Evolution in actin: a protein family drama
- 11:30 089005 SANDKAM, BENJAMIN* - WATSON, COREY - JOY, JEFFREY - BREDEN, FELIX
Long wavelength sensitive opsin genes experience high rates of inter-locus recombination in poeciliid fishes
- 11:45 089006 FEUDA, ROBERTO* - HAMILTON, SINEAD - LONGHORN, STUART - MCINERNEY, JAMES O. - PISANI, DAVIDE
Comparative genomics of early animal vision

1:20 PM - 4:00 PM Sym8 Symposium **Oklahoma E**
ASN Young Investigator Symposium -- Chair: R.E. Ricklefs

- 1:20 Sym88 RICKLEFS, R.E.
Introduction to the ASN Young Investigator Symposium
- 1:30 Sym88001 WARNER, DANIEL
Developmental plasticity and parental effects: their influences on variation in phenotypes and fitness in reptiles
- 2:00 Sym88002 KASUMOVIC, M.M.
Quality and fitness: Are we going about this the right way?

- 2:30 Sym88003 SWENSON, NATHAN
The distribution and diversity of plant function from local to continental scales
- 3:00 Break
- 3:30 Sym88005 PRINGLE, ROBERT
The ecological importance of big herbivores in African savannas, and how it depends on climate

1:30 PM - 3:00 PM 091 Contributed Papers University B
Modelling Social/Reproduction -- Chair: Erol Akcay

- 1:30 091001 AKCAY, EROL
Behavioral dynamics and the evolution of incentives for honesty
- 1:45 091002 MACCARTHY, THOMAS* - MCGRANAHAN, NICHOLAS - SEYMOUR, ROBERT - POMIANKOWSKI, ANDREW
Differential regulation drives plasticity in sex determination gene networks
- 2:00 091003 GONZÁLEZ-FORERO, MAURICIO* - GAVRILETS, SERGEY
Evolution of primitive eusociality via maternal induction
- 2:15 091004 GILBERT, OWEN
A selfish genome model of kin recognition
- 2:30 091005 DAPPER, AMYL* - LIVELY, CURT
A solution to the paradox of recombination: Sexually antagonistic coevolution
- 2:45 091006 DRISCOLL, WILLIAM* - PIERSON, LELAND - PIERSON, ELIZABETH
Public goods-mediated mutualism between global regulatory variants in *Pseudomonas chlororaphis* biofilms

1:30 PM - 3:00 PM 092 Contributed Papers University A
Experimental Evolution II -- Chair: Rees Kassen

- 1:30 092001 MELNYK, ANITA - KASSEN, REES*
Adaptive landscapes in evolving populations of *Pseudomonas fluorescens*
- 1:45 092002 WAITE, ADAM JAMES* - GERARD, WAYNE - SHOU, WENYING
The “adaptive race”: a stochastic solution to the paradox of cooperation
- 2:00 092003 BODBYLROELS, SARAHANN* - KELLY, JOHN
Rapid evolution caused by pollinator loss in *Mimulus guttatus*
- 2:15 092004 MORRISON, KEENAN* - STACY, ELIZABETH
Intraspecific divergence of *Metrosideros polymorpha* seedlings along a successional gradient in East Hawai’i

- 2:30 092005 KELLY, MORGAN
Mitochondrial haplotype contributes to temperature adaptation in a marine copepod.
- 2:45 092006 FARLOW, JAMES* - RANE, HALLIE - LIPINSKI, KENDRA - KATJU, VAISHALI -
BERGTHORSSON, ULFAR
Rapid fixation of duplications and deletions during experimental evolution in *Caenorhabditis elegans* populations

1:30 PM - 3:00 PM 093 Contributed Papers Oklahoma A
Diversification & Phylogeography - Herps II -- Chair: Craig Moritz

- 1:30 093001 MORITZ, CRAIG* - FUJITA, MATTHEW - TONIONE, MARIA - PEPPER, MITZY - PALMER,
RUSSELL
A garbage gecko reveals fine-scale endemism in the monsoonal tropics of Australia
- 1:45 093002 FLORIO, ANTONIA* - RAXWORTHY, CHRISTOPHER
Cryptic chameleons in Madagascar: a phylogeographic study of the *Furcifer lateralis* species complex
- 2:00 093003 RUANE, SARA* - BRYSON, ROBERT, JR. - PYRON, R. ALEXANDER - BURBRINK, FRANK
Gene-tree/species-tree discordance in *Lampropeltis*
- 2:15 093004 BURBRINK, FRANK* - RUANE, SARA - PYRON, ALEX
The impact of gene-tree/species-tree discordance on estimates of diversification
- 2:30 093005 FIRKOWSKI, CARINA* - RIBEIRO, LUIZ - BORNSCHEIN, MARCOS - PIE, MARCIO
Diversity and endemism in cloud forests of Southern Brazil: a tale of two frog clades
- 2:45 093006 STEFFEN, MICHAEL* - BONETT, RONALD
Phylogeography of Ouachita Mountain salamanders

1:30 PM - 3:00 PM 094 Contributed Papers Oklahoma B
Diversification & Character Complexes - Fishes -- Chair: David Collar

- 1:30 094001 COLLAR, DAVID* - MEHTA, RITA - ALFARO, MICHAEL - WAINWRIGHT, PETER
Feeding mode affects evolutionary rates and integration of skull modules in anguilliform fishes
- 1:45 094002 REECE, JOSHUA* - MEHTA, RITA - ALFARO, MICHAEL E. - WAINWRIGHT, PETER -
COLLAR, DAVID
Multiple ways to crack a shell: The evolutionary trajectories leading to imperfect convergence in moray eels (Muraenidae)
- 2:00 094003 BROCHU, KRISTEN* - CRAMPTON, WILLIAM - MALDONADO OCAMPO, JAVIERA -
LOVEJOY, NATHAN
Testing the predator avoidance hypothesis: A molecular phylogenetic approach to the evolution of electric signals in *Gymnotus* (Gymnotidae, Teleostei)

- 2:15 094004 NIEMILLER, MATTHEW* - FITZPATRICK, BENJAMIN - NEAR, THOMAS
To see or not to see: the question of irreversibility of eye degeneration in amblyopsid cavefishes
- 2:30 094005 KELLY, NATASHA* - NEAR, THOMAS - ALONZO, SUZANNE
Diversification of egg-deposition behaviours and the evolution of male-only parental care in darters (Percidae: Etheostomatinae)
- 2:45 094006 HARRINGTON, RICHARD* - NEAR, THOMAS
Multi-locus phylogenetic analyses reveal mitochondrial introgression and patterns of nuptial trait evolution in spottail darters (Percidae: *Etheostoma*)

2:00 PM - 3:00 PM 090 Contributed Papers University C
Adaptation & Life History - Nonvertebrates -- Chair: Emily Behrman

- 2:00 090001 BEHRMAN, EMILY* - SCHMIDT, PAUL
Time Flies: daily and seasonal timing in *D. melanogaster*
- 2:15 090002 ARENDT, JEFF* - FAIRBAIRN, DAPHNE
A test of the size-fecundity model for the temperature-size rule using water striders
- 2:30 090003 RAUL, CUEVADELCASTILLO
Trades offs on the evolution of bumblebee colony and body size
- 2:45 090004 CHAVERRA-RODRIGUEZ, DUVERNEY* - JARAMILLO, NICOLAS - FONSECA, IDALYD
The effects of insecticide resistance on life history traits in *Aedes aegypti* (L)

3:30 PM - 4:15 PM 095 Contributed Papers University B
Modelling - Predation -- Chair: Barney Luttbeg

- 3:30 095001 LUTTBEG, BARNEY* - TRUSSELL, GEOFFREY
Variance in risk and reliability of information should shape how prey estimate predation risk and the sizes of indirect effects
- 3:45 095002 FRAKER, MICHAEL* - LUTTBEG, BARNEY
A spatially-explicit model of predator-prey space games
- 4:00 095003 FLAXMAN, SAM
Evolutionary dynamics of animal movement strategies

3:30 PM - 4:45 PM 097 Contributed Papers Oklahoma A
Diversification & Phylogeography - Herps III -- Chair: Travis Hagey

- 3:30 097001 HAGEY, TRAVIS* - HARMON, LUKE
Dynamics of Gecko Evolution
- 3:45 097002 LAWING, A. MICHELLE* - POLLY, P. DAVID
Modeling the past to understand the future of species' response to climate change using comparative methods, climate envelopes, and paleoclimate modeling
- 4:00 097003 WRAY, KENNETH* - STEPPAN, SCOTT
Testing hypotheses of diversification in the dwarf salamander (*Eurycea quadridigitata*) complex
- 4:15 097004 BARKER, BRITTANY* - RODRIGUEZ-ROBLES, JAVIER - WAIDE, ROBERT - COOK, JOE
The role of sea-level fluctuations, topography, and human introductions in generating island diversity: multi-locus phylogeography of a widespread *Eleutherodactylus* frog in the Puerto Rican Bank
- 4:30 097005 WIENS, JOHN* - PYRON, ALEX - MOEN, DAN
Phylogenetic origins of local-scale diversity patterns and the causes of Amazonian megadiversity

4:00 PM - 4:30 PM L4 Special Lecture Oklahoma E
Fisher Award Lecture

- 4:00 L4001 MAHLER, D. LUKE* - REVELL, LIAM - GLOR, RICHARD - LOSOS, JONATHAN
Ecological opportunity and the rate of trait evolution in radiations of island anoles

4:30 PM - 5:00 PM L2 Special Lecture Oklahoma E
Dobzhansky Prize Address

- 4:30 L2001 MCGLOTHLIN, JOEL
The evolution of genetic architecture during adaptive radiation

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