50th Anniversary
Society for the Study of Evolution
1946 - 1996
Saint Louis, Missouri

Annual Meeting
Society for the Study of Evolution
and
Society of Systematic Biologists

June 19 - 23, 1996

Annual Meeting

Society of Systematic Biologists

Society for the Study of Evolution

June 19 - 23, 1996 Saint Louis, Missouri

sponsored by

Missouri Botanical Garden
Saint Louis University
University of Missouri, St. Louis
Washington University

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Cover illustrations from *The Flora of North America*, Missouri Botanical Garden. Front Cover: *Liriodendron tulipifera*, artist, Y. Wilson-Ramsey. Back Cover: *Quercus stellata*, artist, J. Myers

Summary Schedule of Events

6/19 (Wed)	2:00-7:30 PM	Registration (Mallinckrodt Center)
	1:00	SSE/SSB Steering Committee (McDonnell 212)
	3:00-6:00	Society Board Meetings (SSE - McDonnell 212; SSB - McDonnell 312)
	6:00-7:00	Ernst Mayr SSE Fiftieth Anniversary Address (Brown 100) " Evolutionary Biology as a Discrete Biological Discipline"
	7:00 -	Welcome Reception, Bowles Plaza
6/20 (Thurs)	8:30-12:00	SSE Symposium: Virus Evolution
	8:30-12:00	Concurrent Paper Sessions
	12:00-1:30	Lunch - SSE Business Meeting (Rebstock 215)
	1:30-5:30	SSB Symposium: Phylogeny, Speciation and Evolution of Infectious Disease Agents and Vectors
	2:30-3:30	NSF Presentation and Question & Answer Session (McDonnell 362)
	1:30-5:30	Concurrent Paper Sessions
	5:30-7:00	Poster Session Holmes Lounge - Ridgley Hall
	7:00	Barbecue (meal plan participants- Bowles Plaza)
6/21 (Fri)	8:30-12:00	SSB Symposium: Morphological Data in Phylogenetic Analysis: Recent Progress and Unresolved Problems
	8:30-12:00	Concurrent Paper Sessions
	12:00-1:30	Lunch - SSB Business Meeting (Rebstock 215)
	1:30-2:30	Society of Systematic Biologists. Presidential Address: Michael Donoghue (Brown 100)
	2:30-4:30	Concurrent Paper Sessions
	2:30-3:30	NSF Presentation and Question & Answer Session (McDonnell 362)
	5:00-6:00	SSE 50th Anniversary Awards and American Genetics Association Wilhelmine Key Lecture: "Sexual Selection: A Driver of Genetic Change in Hawaiian Drosophila" Hampton Carson (Graham Chapel)
	6:00-7:00	Buses Depart for Missouri Botanical Garden at conclusion of Key Lecture. (outside of Mallinckrodt)
	6:30-9:00	Reception: Missouri Botanical Garden (last bus departs for campus at 9:00)
6/22 (Sat)	8:30-12:00	SSE Symposium: Maternal Effects as Adaptations
	8:30-12:00	Concurrent Paper Sessions
	12:00-1:30	Lunch - SSE/SSB Steering Committee Meeting (McDonnell 212)
	1:30-5:30	SSE Symposium: Genealogical Approaches to the Study of Phylogenetic Processes
	1:30-5:30	Concurrent Paper Sessions
	7:00	SSE and SSB Banquet (Athletic Complex)
	8:00	SSE Presidential Address: Alan Templeton "Genetic Architecture: Getting to the Heart of the Matter"
6/23 (Sun)	8:30-12:00	Contributed Paper Sessions Field Trips

Notice to Speakers and Poster Presenters:

Speakers: Please check the schedule to reconfirm the time and place of your talk. There may have been minor changes since the preliminary program was posted on the WWW page. Please note the time allotted to you includes both the presentation and question periods. Please help our Session Chairs keep the program on schedule. The Chairs will not allow you to speak beyond the allotted time and will give you warning at 12 minutes by a hand signal.

Poster Presenters: Each poster presentation has been assigned a number corresponding to a reserved space. Space for posters this year is very limited because of a series of renovations on the Washington University campus. Please do not encroach on other presenter's space. Holmes Lounge will be open on Wednesday afternoon for poster set up. Posters must be removed by noon on Friday.

Program Updates - Messages - Job Openings:

Program updates, messages for participants, and job openings will be posted daily in the registration area of Mallinckrodt Center

Field Trips:

Three field trips are available. Two half day trips are scheduled from 12:00 until 6:00 pm on Sunday, June 23. One trip is to Victoria Glade and the other to the Missouri Botanical Garden Arboretum. An all day trip to natural regions in the Ozarks is scheduled from 8:00 until 6:00. Lunch will be provided. Cost is 30.00 for 1/2 day trip; 50.00 for full day trip (cash or check, no credit cards). If you are interested, please register at the registration desk by 5:00 pm on Thursday, June 20. If you are attending a field trip, please be sure to check out of your dorm room and bring your bags with you.

Meals and Shopping

Mallinckrodt Center has both a food court (lower level) and the Hilltop Bakery (upper level) which serves a variety of coffees and bakery items as well as ice cream. Mallinckrodt Center also contains a book store.

The Uncommon Market (lower level of Women's Building, north side of campus) is open at 7:00 am and serves coffee, bakery items, assorted sandwiches and hot foods, as well as vegetarian items.

The University City Loop on Delmar Boulevard is a colorful area of eclectic shops, a wide diversity of restaurants, used book stores, etc. The Loop can be reached by a pleasant walk north of campus (see area map). Blueberry Hill has the world's largest collection of Howdy Doody memorabilia.

William's Pharmacy, located at the corner of Big Bend and Millbrook, has some foods, various sorts of liquid refreshments, as well as pharmacy items. Also in this small shopping center is a Domino's Pizza.

Exhibitors - Book Publishers

There will be a book publisher's display in the Schoenberg Gallery of Mallinckrodt Center (lower level). The Gallery area is near the food court and the Gargoyle (seating for the food court). We hope that all participants will stop by during the course of the meeting to see the books from many of the most active and distinguished publishers in evolutionary and systematic biology.

Academic Press

Alecto Historical Editions

Blackwell Science, Inc.

Cambridge University Press

Elsevier Science Ltd.

Harvard University Press

Paul Gritis Books

Missouri Botanical Garden

Oxford University Press

Johns Hopkins University Press

Sinauer Associates

University of Chicago Press

University of Nebraska Press

Yale University Press

SPONSORS

The organizers acknowledge with special thanks the very generous financial support for the Fiftieth Anniversary and the Annual Meeting of The Society for the Study of Evolution and The Society of Systematic Biologists that has been provided by a number of organizations, including the following:

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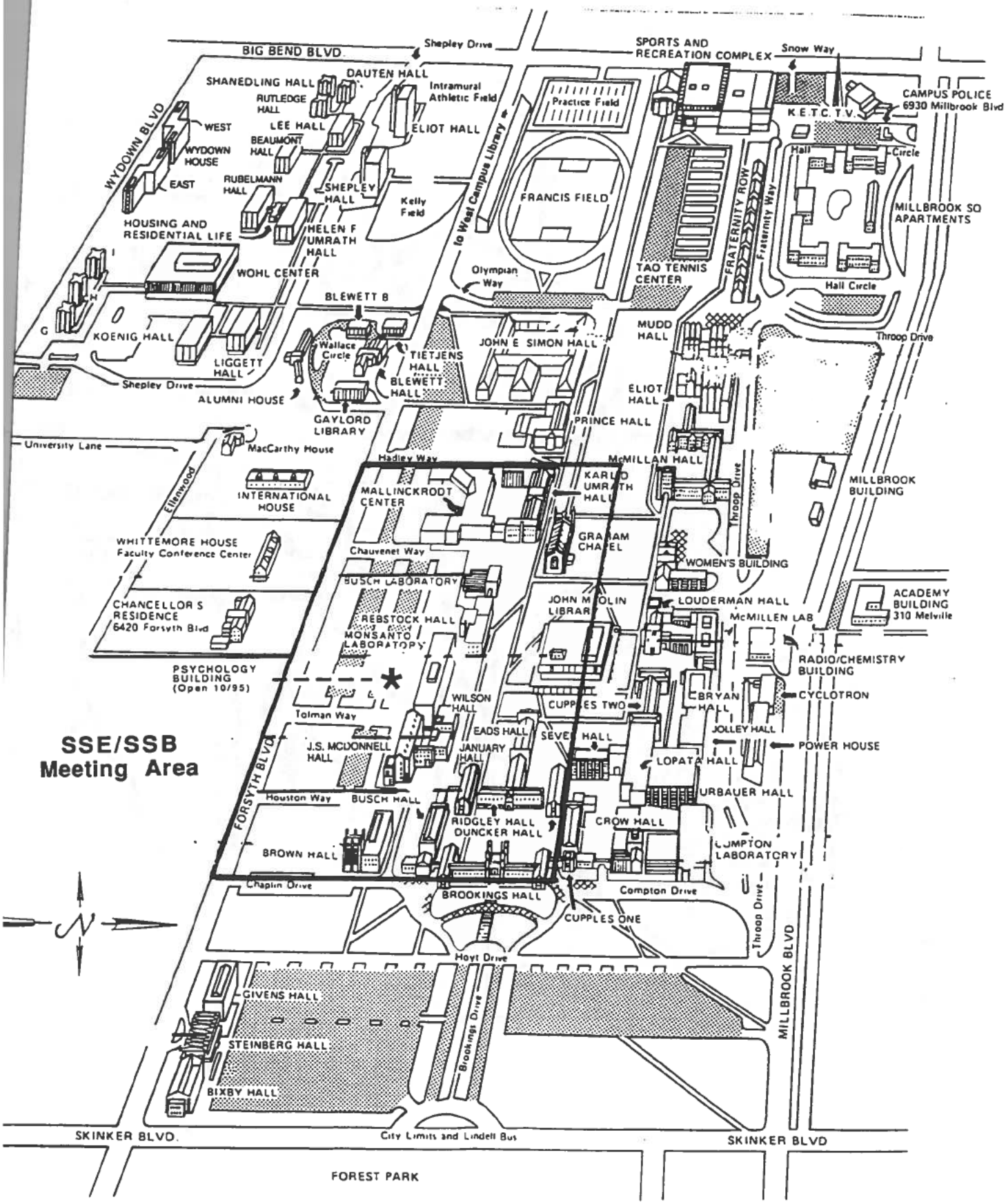

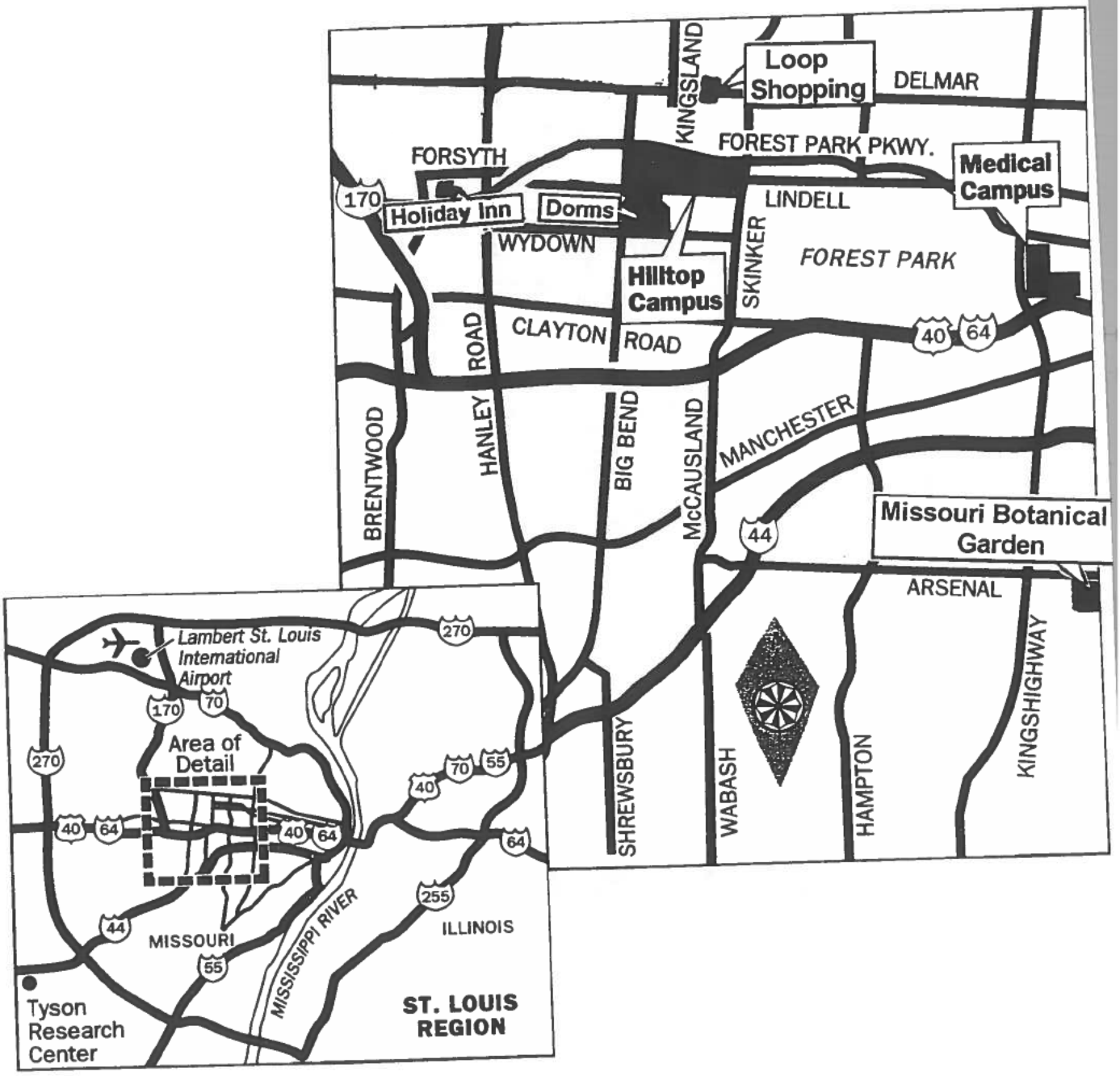
Loop Shopping
DELMAR
KINGSLAND
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FOREST PARK
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MISSOURI
ILLINOIS
MISSISSIPPI RIVER
Tyson Research Center
ST. LOUIS REGION

Program Overview

Thursday, 20th June, 1996

Room	Brown 100	McDonnell 162	Rebstock 215	Wilson 112	January 110	Brown 118	Rebstock 322
Morning I 8:30-10:00	Symposium 1 Virus Evolution	Session 1 Adaptation and Plasticity	Session 2 Molecular Evolution	Session 3 Hybridization and Sexual Isolation	Session 4 Biogeography	Session 5 Population Genetics	Session 6 Morphometrics
10:00-10:30	Break	Break	Break	Break	Break	Break	Break
Morning II 10:30-12:00	(continued)	Session 7 Adaptation and Plasticity	Session 8 Molecular Systematics	Session 9 Hybridization and Sexual Isolation	Session 10 Morphological Systematics	Session 11 Population Genetics	Session 12 Quantitative Genetics
12:00-1:30	Lunch SSB Business Meeting (Rebstock 215)						
Afternoon I 1:30-3:00	Symposium 2 (1:00) Phylogeny, Speciation, and Evolution	Session 13 Life Histories and Development	Session 14 Molecular Systematics	Session 15 Sexual Selection	Session 16 Coevolution	Session 17 Population Genetics	Session 18 Evolutionary Theory
3:00-3:30	Break	Break	Break	Break	Break	Break	Break
Afternoon II 3:30-5:30	of Infectious Disease Agents and Vectors	Session 19 Combined-Data Systematics	Session 20 Molecular Systematics	Session 21 Sexual Selection	Session 22 Phylogenetic Methodology	Session 23 Ecological Genetics	Session 24 Behavior
Evening 5:30-7:00	Poster Session Holmes Lounge Ridgley Hall						

Friday, 21st June, 1996

Room	Brown 100	McDonnell 162	Rebstock 215	Wilson 112	January 110	Brown 118	Rebstock 322
Morning I 8:30-10:00	Symposium 3 Morphological Data in Phylogenetic Analysis:	Session 25 Life Histories and Development	Session 26 Molecular Systematics	Session 27 Geographic Variation and Hybrid Zones	Session 28 Host-Parasite Interactions	Session 29 Population Genetics	Session 30 Community Ecology
10:00-10:30	Break	Break	Break	Break	Break	Break	Break
Morning II 10:30-12:00	Recent Progress and Unresolved Problems	Session 31 Life Histories and Development	Session 32 Molecular Systematics	Session 33 Geographic Variation and Hybrid Zones	Session 34 Molecular Evolution	Session 35 Population Genetics	Session 36 Quantitative Genetics
12:00-1:30	Lunch SSB Business Meeting (Rebstock 215)						
Afternoon I 1:30-2:30	Plenary I SSB Presidential Address: Michael Donoghue						
2:30-3:00	Break						
Afternoon II 3:00-5:00		Session 37 Ecological Genetics	Session 38 The Comparative Method	Session 39 Speciation and Cladogenesis	Session 40 Molecular Evolution	Session 41 Population Genetics	Session 42 Coevolution
Evening 5:00-6:00	Plenary 2 Graham Chapel American Genetics Association Wilhelmine Key Lecture: Hampton Carson						
6:30- 9:00	Reception at the Missouri Botanical Garden						

Saturday, 22nd June, 1996

Room	Brown 100	McDonnell 162	Rebstock 215	Wilson 112	January 110	Brown 118	Rebstock 322
Morning I 8:30-10:00	Symposium 4 Maternal Effects as Adaptation	Session 43 Adaptation and Plasticity	Session 44 Molecular Systematics	Session 45 Geographic Variation and Hybrid Zones	Session 46 Molecular Evolution	Session 47 Population Genetics	Session 48 Plant Mating Systems
10:00-10:30	Break	Break	Break	Break	Break	Break	Break
Morning II 10:30-12:00	(continued)	Session 49 Adaptation and Plasticity	Session 50 Molecular Systematics	Session 51 Geographic Variation and Hybrid Zones	Session 52 Molecular Evolution	Session 53 Population Genetics	Session 54 Plant Mating Systems
12:00-1:30	Lunch SSE/SSB Steering Committee Meeting (McDonnell 212)						
Afternoon I 1:30-3:00	Symposium 5 Geneological Approaches to the	Session 55 Evolution of Sex and Recombination	Session 56 Molecular Systematics	Session 57 Sexual Selection	Session 58 Molecular Evolution	Session 59 Ecological Genetics	Session 60 Maternal Effects as Adaptation
3:00-3:30	Break	Break	Break	Break	Break	Break	Break
Afternoon II 3:30-5:30	Study of Phylogenetic Processes	Session 61 Combined-Data Systematics	Session 62 Molecular Systematics	Session 63 Speciation and Cladogenesis	Session 64 Experimental Evolution	Session 65 Ecological Genetics	Session 66 Maternal Effects as Adaptation
Evening 7:00	SSE/SSB Banquet Athletic Complex						
8:00	Plenary 3 SSE Presidential Address: Alan Templeton						

Sunday, 23rd June, 1996

Room		Rebstock 322	Rebstock 215	McDonnell 361	McDonnell 162	McDonnell 362
Morning I 8:30-10:00		Session 67 Life Histories and Development	Session 68 Evolutionary Theory	Session 69 Geographic Variation and Hybrid Zones	Session 70 Molecular Evolution	Session 71 Ecological Genetics
10:00-10:30		Break	Break	Break	Break	Break
Morning II 10:30-12:00		Session 72 Life Histories and Development	Session 73 Molecular Systematics	Session 74 Macroevolution	Session 75 Population Ecology	Session 76 Population Genetics

Thursday, 20th June: Morning

Brown 100

9:00-12:00 **Symposium 1 Virus Evolution**
Organizer: Varuni Kulasekera

8:30 1 **cancelled**

9:00 2 **The Viruses of the Future? Emerging Viruses and Evolution**
*S.S. Morse

9:30 3 **Evolution of Genetic Exchange in RNA Viruses**
*L. Chao

10:00-10:30 Break

10:30 4 **Application of Phylogenetic Methods in Studies on Virus Evolution**
*D.M. Hillis

11:00 5 **The Evolutionary Arms Race Between a Virus and Antisense RNA**
*J.J. Bull

11:30 6 **Phylogenetic Moments in the AIDS Epidemic**
*G. Myers

12:00-1:30 Lunch
SSE Business Meeting

Thursday, 20th June: Morning I

McDonnell 162

8:30-10:00 **Session 1 Adaptation and Plasticity**
Chair: Donald Miles

8:30 7 **Experimental Studies of the Rate of Evolution in Natural Populations of Guppies (*Poecilia reticulatus*)**
*D. Reznick, F.H. Rodd, F. Shaw, R.G. Shaw

8:45 8 **Phenotypic Selection by Predators on Escape Performance in Natural Populations of Guppies**
*A.J. Cullum

9:00 9 **The Ecological Context of Locomotor Performance in a West Indian Lizard (*Anolis gundlachi*)**
*D.J. Irschick, S. Koruba

9:15 10 **Ontogenetic Effects and Repeatability of Locomotor Performance in a Population of the Common Tree Lizard, *Urosaurus ornatus***
*D.B. Miles

9:30 11 **Developmentally Plastic Physiological Traits and Sex Ratios Impact Survival of Snapping Turtles: An Adaptive Basis for Environmental Sex Determination?**
* S. O'Steen

9:45 12 **Exploring Genetic and Environmental Determinants of Amphicarpy Using Path Analysis**
*H. Callahan, D.M. Waller

10:00-10:30 Break

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Rebstock 215

8:30-10:00 **Session 2 Molecular Evolution**
Chair: Jason Rauscher

8:30 13 **Solving the "Novick-Sziland Paradox"?: Revisiting the Generation Time Studies on *E. coli***
*T.Y. Steen

8:45 14 **Analysis of Genetic Relationships of Central American and Mexican Pines Using Molecular Markers Chosen to Differentiate Taxa**
*B.J. Furman, D. Grattapaglia, W.S. Dvorak, D.M. O'Malley

9:00 15 **A Reevaluation of the Infrageneric Classification of *Korthalsella* (Viscaceae) Based on DNA Sequence Data**
*M. Molvray, P. Kores, M.W. Chase

9:15 16 **Adaptive Radiation and Molecular Phylogenetics in Tropical Alpine *Espeletia* (Asteraceae: Heliantheae)**
*J.T. Rauscher

9:30 17 **Phylogeny and Biogeography of the Chilean Species of the Pacific Coastal Desert Endemic *Malesherbia* (Malesherbiaceae)**
* K.M. Gengler

9:45 18 **The Evolution of *Plasmodium* (the Causative Agent of Malaria) and Other Haemosporidia Inferred From Analyses of 18S Ribosomal Genes and the Circumsporozoite Protein**
*J.C. Kissinger, T.F. McCutchan

10:00-10:30 Break

8:30-10:00 Wilson 112
Session 3 Hybridization and Sexual Isolation
Chair: Bill Etges

8:30 19 **Meiotic Analysis of Chromosomal Rearrangements and Their Potential Role in Reproductive Isolation in Collared Lemmings**
*S.A. Berend, D.W. Hale, I.F. Greenbaum, M.D. Engstom

8:45 20 **A Quantitative Genetic Analysis of Prezygotic and Postzygotic Isolation Between *Drosophila serrata* and *Drosophila birchii***
*M. Blows

9:00 21 **Premating Isolation and Epicuticular Hydrocarbon Variation Are Influenced by Use of Different Host Plants in Cactophilic *Drosophila mojavensis***
M.D. Stennett, *W.J. Etges

9:15 22 **Reproductive Isolating Mechanisms in the Louisana Irises**
*S.E. Carney, M.L. Arnold

9:30 23 **Influence of Social Organization on Gene Flow in the Introduced Fire Ant *Solenopsis invicta***
*D.D. Shoemaker, K G. Ross

9:45 24 **Microgeographic Genetic Structure in Fire Ants: Implications for Spread of an Alternative Social Organization**
*K.G. Ross, D D. Shoemaker

10:00-10:30 Break

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8:30-10:00 January 110
Session 4 Biogeography
Chair: Brett Riddle

8:30 25 **Life History and Comparative Phylogeography of Darters (Pisces: Percidae) from the Central Highlands of North America.**
*T.F. Turner, J.C. Trexler

8:45 26 **Evaluation of the Roles of Vicariance and Dispersal in the Evolution of Eastern Fishes: A Case Study Using the Minnow, *Notropis rubellus***
*C.L. Secor, T.E. Dowling

9:00 27 **Post-Glacial Phylogeography of the Circumarctic *Daphnia pulex* Complex**
*J.K. Colbourne, L.J. Weider, T.J. Crease, A. Hobaek, P.D.N. Hebert

9:15 28 **Evolution of Freshwater Adaptation: Statistical Models to Test Hypotheses of Habitat Invasions**
*Carol Eunmi Lee

9:30 29 **Do Current Paradigms in Historical Biogeography Apply to Continental Biotas? Searching for Areas of Endemism and Area-Relationships in North American Aridlands Mammals**
*B.R. Riddle

9:45 30 **Historical Biogeography of Some Etheostomid Darters of the Central Highlands Based on mtDNA Variation**
*P. Wilson, A.R. Templeton

10:00-10:30 Break

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8:30-10:00 Brown 118
Session 5 Population Genetics: Mostly mtDNA Studies
Chair: Steven Palumbi

8:30 31 **Mitochondrial DNA Recombination in Natural Populations of Basidiomycete Fungi**
J.B. Anderson*, B.J. Saville, J. Xu

8:45 32 **Analysis of Sequence Variation at the Mitochondrial Cytochrome b Gene of Atlantic Cod**
*E. Arnason

9:00 33 **cancelled**

9:15 34 **Estimation of mtDNA Diversity using Single Stranded Conformational Polymorphism (SSCP) and Sequencing: A Comparison of Western Minnow Data Sets**
*C.A. Tibbets, T.E. Dowling

9:30 35 **Detecting Departures from Equilibrium Population Structure with mtDNA: Deviants in the Tropical Pacific**
*S.R. Palumbi

9:45 36 **Founder Events in Invading Populations: A Multilocus Intron Perspective**
*F.X. Villablanca, G.K. Roderick, S.R. Palumbi

10:00-10:30 Break

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Rebstock 322

8:45-10:00 **Session 6 Morphometrics**
Chair: Robert T. Dillon

8:45 37 **A Comparative Approach to Craniofacial Evolution in the Papionins (Primates)**
*A.M. Schmitz, J.M. Cheverud

9:00 38 **Fluctuating Asymmetry in *Myonycteris brachycephala*, a Bat With an Asymmetric Dental Formula**
*J.Juste B., R.D. Owen

9:15 39 **The Heritability of Shell Metrics in the Freshwater Snail, *Physa heterostropha***
*R.T. Dillon, Jr

9:30 40 **Analysis of Variation in Stem Morphology and Branching Architecture of 26 Species of North American Columnar Cacti (Tribe Pachycereaee), in Relationship to Mechanical Design, Environment, and Phyletic Inertia**
*D. Cornejo, B.B. Simpson

9:45 41 **Character Resampling: A New Technique for Evaluating Character Based Group Separation**
G. Estabrook, * M.L. Julius, E.F. Stoermer

10:00-10:30 Break

Thursday, 20th June: Morning II

McDonnell 162

10:30-12:00 **Session 7 Adaptation and Plasticity**
Chair: Massimo Pagliucci

10:30 42 **Bee Color Vision Predates the Evolution of Flower Color**
*L. Chittka

10:45 43 **Adaptive Changes in Seed-Oil Composition Along a Temperature Gradient in the Genus *Helianthus***
*C. Randal Linder

11:00 44 **Evolution of Phenotypic Plasticity: a Comparative Approach in the Genus *Arabidopsis***
*M. Pigliucci, K. Cammell, J. Schmitt

11:15 45 **Microgeographic Variation in Life History: Maximization versus Optimization in the Garter Snake, *Thamnophis elegans***
*A. Bronikowski, S.J. Arnold

11:30 46 **The Importance of Development for Understanding Reaction Norm Evolution**
*C. Schlichting

11:45 47 **From Source to Sink: Consequences of Habitat Heterogeneity for Effective Dispersal and Selection in the Alpine Snow Buttercup, *Ranunculus adoneus***
*M.L. Stanton, C. Galen

12:00-1:30 Lunch SSE Business Meeting

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Rebstock 215

10:30-12:00 **Session 8 Molecular Systematics: Reptiles**
Chair: Todd Jackman

10:30 48 **Using Molecular Phylogenies to Infer the Historical Biogeography of Fourspecies of Arid-Dwelling Lizards From the Southwestern United States: Testing Hypotheses of Taxonomic Response to Pliocene Versus Pleistocene Events**
*D. Orange, B.R. Riddle

10:45 49 **Molecular Phylogenetic Perspective on the Allometry of Life History and Morphology Across an Enormous Size Differential: Monitor Lizards of the Genus *Varanus***
*D. Pepin, A. Larson

11:00 50 **Phylogenetic Relationships and Evolution of Viviparity in the *Sceloporus scalaris* Complex (Squamata)**
*D.A. Creer, K.M. Kjer, D.L. Simmons, J.W. Sites, Jr.

11:15 51 **A Molecular Perspective on Transgulfian Vicariance and the Origin of the Genus *Sator* (Squamata: Phyrynosomatidae) in the Sea of Cortez**
O. Flores, K.M. Kjer*, M. Benabib, J.W. Sites Jr.

11:30 52 **Confirmation of Parallel Adaptive Radiations in Caribbean Anoline Lizards Based on Molecular Sequence Data**
*T.R. Jackman, J.B. Losos, A. Larson, K. deQueiroz

11:45 53 **Molecular Systematics and Biogeography of the New World Turtle Genera *Trachemys* and *Kinosternon***
*D.E. Starkey, R.W. Guthrie, M.R.J. Forstner, J.B. Iverson, S.K. Davis

12:00-1:30 Lunch SSE Business Meeting

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Wilson 112

10:30-12:00 **Session 9 Hybridization and Sexual Isolation**
Chair: Richard Sage

10:30 54 **Analysis of Natural Hybridization in Leopard Frogs (*Rana pipiens* Complex) I. Extent of Hybridization in Central Missouri**
*S.M. Stone, R.D. Sage

10:45 55 **Analysis of Natural Hybridization in Leopard Frogs (*Rana pipiens* Complex) II. Larval Performance in Artificial Ponds**
*M.J. Parris, R.D. Semlitsch, R.D. Sage

11:00 56 **Analysis of Natural Hybridization in Leopard Frogs (*Rana pipiens* Complex) III. Reproductive Condition of Male Hybrids Produced in the Laboratory**
*R.D. Sage

11:15 57 **Trapping a Marine Mussel (*Mytilus* spp.) Hybrid Zone: The Role of Cape Mendocino, CA as a Barrier to Larval Dispersal**
*P. Rawson, T.J. Hilbish

11:30 58 **Pronounced Polyploidy in the Asexual Marine Clam *Lasaea***
*D. O'Foighil, C. Thiriot-QuiÈvreux

11:45 59 **Reproductive Isolation and Ecological Maintenance of a Recently Evolved Senecio Hybrid In York, England**
*A.J. Lowe, R.J. Abbott

12:00-1:30 Lunch SSE Business Meeting

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January 110

10:30-12:00 **Session 10 Morphological Systematics**
Chair: Geoffrey Levin

10:30 60 **Phylogeny of the *Acalypha virginica* Group (Euphorbiaceae): Impacts of Different Methods for Coding Morphological Data**
*G.A. Levin

10:45 61 **Phylogenetic Analysis of the Order Octopoda (Mollusca: Cephalopoda) Based on Anatomical Characters**
*J.R. Voight

11:00 62 **Phylogenetic Relationships of *Mantis* Shrimp Based upon Morphological Data**
*V.A. Cappola

11:15 63 **Phylogeny, Ontogeny and Gonad Evolution of the Microdesmine Gobies**
*C.E. Thacker

11:30 64 **The Evolution of the Feeding Apparatus in *Xenarthra* and *Pholidota* (Mammalia: Eutheria)**
*K.Z. Reiss

11:45 65 **Monophyly and Phylogeny of the Cuckoos (Aves: Cuculidae) Based on Cranial and Postcranial Skeletal Characters**
*J.M. Hughes

12:00-1:30 Lunch SSE Business Meeting

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Brown 118

10:30-12:00 **Session 11 Population Genetics: *Drosophila***
Chair: Norman Johnson

10:30 66 **Repeatability and Heritability of Sperm Displacement Ability in *Drosophila melanogaster***
*A.S. Gilchrist, L. Partridge

10:45 67 **Analysis of Sex-Ratio Distortion Found in Zimbabwe and Other Southern African *Drosophila melanogaster***
*N. Johnson

11:00 68 **Nucleotide Polymorphism and Divergence At the Pgm Locus in *Drosophila***
*B.C. Verrelli, W.F. Eanes

11:15 69 **Evolutionary Relationships and Nucleotide Polymorphism of Three Tandemly Repeated Esterase-5 Genes in *Drosophila pseudoobscura***
*L. King

11:30 70 **Amino Acid Sequence Evolution of Two Genes in the Alcohol Dehydrogenase Region of *Drosophila pseudoobscura***
*S.W. Schaeffer

11:45 71 **Conditional Hitchhiking of *Drosophila* mtDNA**
*S.T. Kilpatrick, D.M. Rand

12:00-1:30 Lunch SSE Business Meeting

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Rebstock 322

10:30-12:00 **Session 12 Quantitative Genetics**
Chair: Todd Jackman

10:30 72 **A QTL Model System: Chemotaxis in the Nematode, *Caenorhabditis elegans***
*P.C. Phillips, B. Gerami

10:45 73 **The Magnitude of QTL Effects: a Test of Beavis' "Deceit Hypothesis"**
*D. Roff

11:00 74 **General Formulae for Obtaining the MLEs and the Asymptotic Variance-Covariance Matrix in Mapping Quantitative Trait Loci When Using the EM Algorithm**
*C.-H. Kao, Z.-B. Zeng

11:15 75 **A Search for Quantitative Trait Loci Affecting Asymmetry of Mandibular Characters in Mice**
*L.J. Leamy, E.J. Routman, J.M. Cheverud

11:30 76 **Evolution of Primate Postcranial Morphology: A Quantitative Genetic Analysis of Three Species**
*L.A.P. Kohn

11:45 77 **Mapping Quantitative Trait Loci With Dominant and Missing Markers**
C. Jiang, *Z.-B. Zeng

12:00-1:30 Lunch SSE Business Meeting

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Brown 100

1:00-5:30 **Symposium 2 Phylogeny, Speciation, and Evolution of Infectious Disease Agents and Vectors**
Organizers: David Mindell and Stephen Rich

1:00 78 **Parasite Populations and the Species Concept**
*S. Rich

1:30 79 **Evolutionary Origins of Malaria Parasites**
*A. Escalante

2:00 80 **The *Anopheles gambiae* Sibling Species Complex: A Model System for Understanding Speciation using Gene Phylogenies**
*N.J. Besansky

2:30 81 **Ecological and Evolutionary Pressures on Leshmanial Parasites**
*J.J. Shaw

3:00-3:30 Break

3:30 82 **Mosquitoes and Arbovirus Evolution**
*T. Scott

4:00 83 **Primate Immunodeficiency Viruses: Phylogeny, Host-Species Shifts and Natural Selection**
*D.P. Mindell

4:30 84 **Evolution of Influenza, Human Immunodeficiency and Vesicular Stomatitis Viruses: Lessons**
*W.M. Fitch

5:00 85 **Evolutionary Dynamics of AIDS and Related Viruses**
*W.-H. Li

Thursday, 20th June: Afternoon

McDonnell 162

1:30-3:00 **Session 13 Life Histories and Development**
Chair: Kelly Jean Tilmon

1:30 86 **Disruption in Insect Life History Timing by Experimental Host Shifts**
*K.J. Tilmon, T.K. Wood

1:45 87 **Insect Race Formation: Host Fidelity During Mating and Oviposition**
*T.K. Wood, K.J. Tilmon, A.B. Shantz

2:00 88 **All Dressed Up and Nowhere to Grow: The Ecological Costs of Showy Flowers in the Alpine Skypilot, *Polemonium viscosum***
*C. Galen and J. Huddle

2:15 89 **Can Fitness Gain Through Male Function Compensate for Resource-Based Fitness Losses Through Female Function in a Hermaphroditic Plant?**
*E. Elle

2:30 90 **Floral Evolution in *Nicotiana sect. alatae***
*A. Ippolito, T.P. Holtsford

2:45 91 **Regressive Evolution and Morphological Opportunity**
*M.H. Wake

3:00-3:30 Break

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Rebstock 215

1:30-3:00 **Session 14 Molecular Systematics: Mammals/Insects**
Chair: Jane Norman

1:30 92 **Molecular Evidence Supporting a Xenarthran/Pholidotan Clade Among Eutherian Mammals**
*J.E. Norman, M.V. Ashley

1:45 93 **Molecular Systematics and Paleobiogeography of the South American Sigmodontine Rodents**
*S.R. Engel, S.K. Davis

2:00 94 **New World Monkey Phylogeny Inferred From Mitochondrial COII and Nuclear G6PD DNA Sequence Data**
*M. von Dornum, M. Ruvolo

2:15 95 **Molecular Phylogeny of the Riodinidae (Lepidoptera) Based on Nuclear and Mitochondrial Markers**
*D.L. Campbell, N.E. Pierce

2:30 96 **Phylogeny of Noctuoidea (Lepidoptera): Evidence From Protein-Encoding Nuclear Genes**
Q. Fang, A. Mitchell, S. Cho, J. Regier, *C. Miller, T. Friedlander, R. Poole, S. Zhao

2:45 97 **Hierarchical Analysis of Variation in the Mitochondrial 16S rRNA Gene Among Hymenoptera**
*S.A. Cameron, J.B. Whitfield

3:00-3:30 Break

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Wilson 112

1:30-3:00 **Session 15 Sexual Selection**
Chair: Michael J. Ryan

1:30 98 **A Phylogenetic Investigation of a Pre-Existing Bias in Poeciliid Fishes**
*A.L. Basolo

1:45 99 **Response to Selection for Spectral Sensitivity in Guppies (*Poecilia reticulata*) and Implications for Sexual Selection of Male Color Patterns**
*J.A. Endler

2:00 100 **Female Preference for Males With Symmetrical Bar Number in the Swordtail Fish, *Xiphophorus cortezi***
*M.R. Morris, K. Casey

2:15 101 **Additivity and Equality in Sensory-Exploitation Traits in the Tungara Frog**
*M.J. Ryan, A.S. Rand

2:30 102 **Sexual Selection and Gamete Allocation in Coral Reef Fish**
*R.R. Warner

2:45 103 **cancelled**

3:00-3:30 Break

January 110

1:30-3:00 **Session 16 Coevolution**
Chair: Brian Farrell

1:30 104 **Seabird and Louse Coevolutionary History: Sequence Data, Reconciliation Analysis and BPA**
*A.M. Paterson, G.P. Wallis, R.D. Gray

1:45 105 **Host-Parasite Coevolution in the Protozoan Phylum Apicomplexa: Evidence from Small Subunit Ribosomal RNA Gene Sequences**
*J.R. Barta, D.S. Martin, R.A. Carreno, B.A. Coles, M.J. Hozza, H. Profous-Juchelka, *M.A. Powles

2:00 106 **Diversification of the Leaf-Beetles and Allies: Coevolution Writ Large?**
*B.D. Farrell

2:15 107 **Coevolutionary History Alters the Effects of *Capillaria hepatica* (Nematoda) Infection on Cold Tolerance in Deer Mice (*Peromyscus maniculatus*)**
*S. Meagher, T. O'Connor

2:30 108 **Phylogeny of Some Australian Lycaenid/Ant Mutualisms**
*N.E. Pierce

2:45 109 **Molecular and Morphological Data Suggest the PolyDNA Virus-Bearing Braconid Wasps (Hymenoptera) Form a Monophyletic Lineage**
*J. B. Whitfield, C. Guerber

3:00-3:30 Break

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Brown 118

1:30-3:00 **Session 17 Population Genetics**
Chair: Michael Antolin

1:30 110 **Population Genetics of the Blue Crab (*Callinectes sapidus*) from New York to Texas**
*A.L. McMillen-Jackson, T.M. Bert, P. Steele

1:45 111 **Mitochondrial and Microsatellite DNA Analyses Reveal Strong Genetic Divergence Among Sympatric Populations of Landlocked Atlantic Salmon (*Salmo salar*)**
*N. Tessier, L. Bernatchez

2:00 112 **Microsatellites to Assess the Influence of Population Dynamics and Selfing on Spatio-Temporal Genetic Variation in the Freshwater Snail *Bulinus truncatus* (Basommatophora : Planorbidae)**
*F. Viard, P. Jarne

2:15 113 **Population Genetics of an Outbreeding Parisitoid Wasp Via RAPD-SSCP Markers**
*M. Antolin

2:30 114 **Using RAPDs to Compare the Genetic Diversity of Two Endemic Hawaiian Lobelioids, *Clermontia kakeana* Meyen and *Cyanea mceldowneyi* Rock**
*R. Palmer

2:45 115 **RAPD Variation in a Threatened Floodplain Species, *Boltonia decurrens***
W. Klinke, M. Smith, *S.A. McCommas

3:00-3:30 Break

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Rebstock 322

1:30-3:00 **Session 18 Evolutionary Theory**
Chair: Gabriela Chavarria

1:30 116 **The Evolution of Gametophytic Self-Incompatibility: A New Approach**
*J.E. Steinbachs, K.E. Holsinger

1:45 117 **Fixation of Underdominant Alleles by Cluster of New Mutations: A New Model for Evolution of Reproductive Isolation**
*H. Huai, R.C. Woodruff

2:00 118 **Interactions Within and Between Environmental and Genetic Determinants of Fitness in *Arabidopsis thaliana***
*A. Peters

2:15 119 **Estimating Two Types of Gene Flow Using Joint Nuclear-Mitochondrial-Chloroplast Data**
*M.E. Orive, M.A. Asmussen

2:30 120 **Systematics and Behavior of the Neotropical Bumble Bee Genus *Bombus* (Hymenoptera: Apidae)**
*G. Chavarria

2:45 121 **Testing Mechanisms of Neural Evolution in Gymnotoid Electric Fishes**
* J.S. Albert, M.J. Lannoo

3:00-3:30 Break

Thursday, 20th June: Afternoon II

McDonnell 162

3:30-5:30 **Session 19 Combined-Data Systematics**
Chair: Paul Chippindale

3:30 122 **Molecules, Morphology, and the Phylogenetics of Cetaceans**
*S. Messenger, J. McGuire

3:45 123 **Morphological and Molecular Analysis of a Cryptic Species Group: The *Metepeira labyrinthea* Clade (Araneae: Araneidae)**
*W.H. Piel, K. Nutt

4:00 124 **Data Set Incongruence and the Phylogeny of Crocodilians**
*S. Poe

4:15 125 **Phylogeny of Frogs Derived From Ribosomal DNA and Morphological Characters**
*A. Graybeal, K. Kjer, D.C. Cannatella

4:30 126 **Phylogeny, Species Boundaries, and Biogeography of Middle American Jumping Vipers, Genus *Atropoides***
*P. Chippindale, L. Ammerman, J. Campbell, D. Lawson

4:45 127 **Phylogenetic Analysis of a Gene Family Using Amino Acid Sequences and Intron Positions**
*M.E. White, C.D. Watkins, B.I. Crother

5:00 128 **Behavioural and Molecular Evolution in the Pelecaniformes**
*R. Gray, M. Kennedy, H. Spencer

5:15 129 **Molecular Congruence within a Subgenus of *Anopheles* Mosquitoes**
*J.A. Danoff-Burg, J.E. Conn

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Rebstock 215

3:30-5:30 **Session 20 Molecular Systematics**
Chair:Shannon Hackett

3:30 130 **Towards a Molecular Phylogeny of *Cicindela*: Patterns of Cladogenesis and Ecological Diversification in a Large Genus of Beetles**
*A.P. Vogler

3:45 131 **mtDNA Phylogeny of the Whooping Crane Species Group (Aves: Gruidae)**
*M. Fain, C. Krajewski

4:00 132 **Molecular Evolutionary Relationships Among West Indian Tanagers in the Genus *Spindalis***
*N.K. Klein

4:15 133 **Molecular Systematics and Biogeography of Manakins (Aves: Pipridae)**
*S.J. Hackett

4:30 134 **A Phylogeny of Plant Parasitic Nematodes (Order Tylenchida) Based on rDNA Sequences**
*N. Galway, F. Driver, J. Curran

4:45 135 **Molecular Phylogenetics of the Honeyeaters (Aves: Meliphagidae): Evolution in an Ecologically-Diverse and Cooperatively-Breeding Family of Passerines**
*A.C. Driskell

5:00 136 **Phylogeny of the Avian Family Ciconiidae Based on Cytochrome b Sequences and DNA-DNA Hybridization Data**
*B. Slikas

5:15 137 **Phylogenetic Relationships Among *Saguinus*: Implications for the Historical Dispersal of Tamarins**
*S.C. Jacobs

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Wilson 112

3:30-5:30 **Session 21 Sexual Selection**
Chair: James Robinson

3:30 138 **The Resolution of the Lek Paradox**
*D. Houle, L. Rowe

3:45 139 **The Rock-Paper-Scissors Game and the Evolution of Alternative Male Strategies**
*B. Sinervo, C.M. Lively

4:00 140 **Nonfertilizing Sperm Do Not Increase First Male Fertilization Advantage in Sperm Competition**
*R.R. Snook

4:15 141 **The Relationship Between Mating System and Penes Morphology in Ischnuran Damselflies**
*J.V. Robinson, K.L. Novak

4:30 142 **Reproductive Success of Male Monarch Butterflies (*Danaus plexippus*): Effects of Mating Frequency, Spermatophore Size, and Sperm Competition**
*K. Oberhauser

4:45 143 **Correlations Between Mating Success, Aggressive Success, and Head Width in the Stalk-Eyed Fly, *Drosophila heteroneura***
*C.R.B. Boake, M. DeAngelis

5:00 144 **Molecular and Morphological Evidence for Faster Divergence of Reproductive Traits in *Drosophila***
*A. Civetta, R.S. Singh

5:15 145 **Genetic Assessment of Reproductive Success in Naturally Spawning Wild and Captively Reared Coho Salmon**
*L. Park, J. Hard, B. Berejikian, S. Tezak, S. Schroder

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January 110

3:30-5:30 **Session 22 Phylogenetic Methodology**
Chair: James S. Rogers

3:30 146 **Inflation of Estimates of Nodal Support for Springtail (Insecta: Collembola) Families When Among-Site Rate Variation Is High**
*C. Simon, F. Frati, J. Sullivan

3:45 147 **Do Trees With Multiple Optimality Peaks Hinder Maximum Likelihood Estimation of Phylogenies From Nucleotide Sequences?**
*J.S. Rogers, D.L. Swofford

4:00 148 **Supraspecific Taxa in Phylogenetic Analyses: Implicit Assumptions, Explicit Errors**
*O.R.P. Bininda-Emonds

4:15 149 **Taxon Sampling in Phylogenetic Analyses**
*M. McMahon

4:30 150 **The Markovian Tree As a Null Model in the Study of Phylogenetic Radiations: Problems and a Solution**
*M.S. Rosenberg

4:45 151 **HYPERPARS: A Program for Inferring the Forest of Gene Trees As a New Approach to Phylogeny**
*A.W. Dickerman

5:00 152 **Microsatellite Mutation Parameters with Range Constraints**
*D. Pollock, D. Goldstein, A. Bergman, M. Feldman

Brown 118

3:30-5:30 **Session 23 Ecological Genetics**
Chair: Tracy McLellan

3:30 153 **Variability of the Mitochondrial DNA in Current and Past Populations of the Endangered Hine's Emerald Dragonfly (*Somatochlora hineana*)**
*J.R. Purdue, E.D. Cashatt, T.E. Vogt

3:45 154 **Polymorphism for Leaf Mottling in *Begonia dregei* and Tolerance to Powdery Mildew**
*T. McLellan

4:00 155 **Levels of Outcrossing and Inbreeding Depression Among Variably Isolated Populations of the Rare *Limnanthes bakeri***
*J. Dole

4:15 156 **Phylogeography in a Pollinating Seed Parasite, *Greya politella* (Lepidoptera: Prodoxidae)**
*J. Leebens-Mack, J.M. Brown, J.N. Thompson, O. Pellmyr, R.G. Harrison

4:30 157 **Natural Selection and the Evolution of Resistance in Field Populations of the Annual Plant, *Arabidopsis thaliana***
*R. Mauricio, M.D. Rausher

4:45 158 **Host Preference Among Populations of *Drosophila mojavensis* that Use Different Host Cacti**
*B.D. Newby, W.J. Etges

5:00 159 **Can Asymptomatic Virus Infection Affect Fitness? Infection and Seed Production in Three Weedy Grass Species**
*S.K. Remold,

5:15 160 **Within-Host Population Dynamics of Persistent Infections**
* R. Antia, J.C. Koella, V. Perrot

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Rebstock 322

3:30-5:30 **Session 24 Behavior**
Chair: Else Juliette Fjerdingstad

3:30 161 **Why Do Ant Queens Mate Multiply? - An Examination of the Patterns of Polyandry in Atta Leafcutter Ants (Hymenoptera: Formicidae) Using Microsatellite DNA Data and Sperm Counts**
* E.J. Fjerdingstad

3:45 162 **Selforganization of Construction Behavior in Social Wasps**
*J.W. Wenzel.

4:00 163 **Learning and Memory in *Drosophila melanogaster***
*K.L. Lofdahl

4:15 164 **Developmental Isolation and Subsequent Adult Behavior of *Drosophila paulistorum*: Courtship and Sexual Selection**
*Y.-K. Kim, L. Ehrman, T.-W. Kwan

4:30 165 **Effect of Rearing Environment on Female Preference for Male Calling Song in a Bivoltine Ground Cricket**
*A.E. Olvido, P.R. Fernandes, T.A. Mousseau

4:45 166 **Ancestral Allorecognition Systems in a Clade of Marine Protochordates**
*S. Cohen, Y. Saito, I. Weissman

5:15 167 **Multipurpose Signals in Anolis Lizards: Sexual Selection or Predator-Prey Communication?**
*M. Leal, J. Rodriguez-Robles

Thursday, 20th June: Evening

Holmes Lounge

5:30-7:00 **Poster Session**

169 **Special Cases of Joint Cytonuclear Selection**
*C.S. Babcock, M.A. Asmussen

170 **The Effects of Spatial Heterogeneity on Mate Choice and Subsequent Gene Flow**
*L. Hartt, P. Crowley

171 **Modelling Selection for Mutable Genes: Could Microsatellite Regulatory Sequences Evolve as Adaptively Adjustable Tuning Knobs?**
*D.G. King

172 **Cytonuclear Disequilibria Under Tetrasomic Inheritance and Mixed Mating**
*R.D. Overath, M.A. Asmussen

173 **Feedback, Non-Linear Systems, and Chaos Theory Applied to Extinction, Punctuated Equilibrium, and Other Problems in Evolutionary Theory**
*D.S. Robertson, M.C. Grant

174 **The Relationship Between the Level of Environmental Variability and the Level of Phenotypic Plasticity: An Empirical Test**
*G. Davidowitz

175 **Molecular Phylogeography of the Alexander Archipelago of Southeast Alaska: A Multi-Taxa Approach**
K.D. Stone, J.A. Cook, *C.J. Conroy, J.R. Demboski, B. Johnson, R. Brenner, S. O. MacDonald

176 **The Significance of Seasonal Light Regimes for Suites of Traits in *Smilacina stellata***
*A.W. Stork

177 **Germination Responses to Temperature in Two Alpine *Potentillas***
*K.A. Stinson

178 **The Evolution of Life-History Characters in *Drosophila melanogaster* Selected for Postponed Senescence Using Relaxed Selection**
*H.K. Brar, M.R. Rose

179 **Experimental Rejection of a Nonadaptive Explanation for the Evolution of Increased Cell Size in *Escherichia coli***
*J.A. Mongold, R.E. Lenski

180 **The Effect of Male Flower Age on Pollen Viability and Progeny Performance in *Silene latifolia* (Caryophyllaceae)**
J. Ly, *S.B. Carroll

181 **Reproductive Scaling and Maturation Phenotype of the Midge, *Chironomus tentans* (Fabricius)**
*J.K. Cooper, M.G. Butler,

182 **Sexual Dimorphism in Asexual Reproduction in the Brittle Star,*Ophiactis savignyi***
*T.M. McGovern

183 **The Phylogeny of Amphibian Metamorphosis : A View from the Skull**
*J.O. Reiss

184 **A Retrospective Analysis of Growth Rates of Terminal and Initial Phase Bluehead Wrasse (*Thalassoma bifasciatum*) Based on Otolith Microstructure**
*L. Rogers

185 **Are Inbred Offspring Less Fit? Survival in a Natural Population of the Mexican Jay**
*J.L. Brown, E.R. Brown

186 **Plant Hybridization Isn't as Common as You Think**
*N. Ellstrand

187 **Asymmetry in Reciprocal Hybrid Male Sterility Between Species of the *Drosophila simulans* Clade**
*R.J. Kulathinal, R.A. Morton, R.S. Singh

188 **Role of Gene Interactions in Hybrid Speciation: Evidence from Ancient and Experimental *Helianthus* Hybrids**
*L.H. Rieseberg, *C.R. Linder, B. Sinervo, M.C. Ungerer, D.M. Arias

189 **A Comparison of the Relative Fertilization Success of Within- versus Between-Population Pollen in *Mimulus guttatus* (Scrophulariaceae)**
M. Bailey, Y. Brandt, K. Gardner, *J. Price

190 **Sex, Flies, and Videotape: A Possible Speciation Event in *Drosophila melanogaster***
*S. Turkington, G.Wyckoff, C.-I. Wu

191 **Molecular Phylogenetics of the Urochordates: Evolution of Life Histories**
*L.S. Corley, B.J. Swalla

192 **Convergent Evolution of Song Phenotype in *Chrysoperla* Green Lacewings (Insecta: Neuroptera: Chrysopidae): Acoustical and Molecular Evidence**
*C.S. Henry, M.M. Wells

193 **Phylogenetics and Speciation in the Genus *Daphnia***
*D. Straughan, N. Lehman

194 **Proposed Phylogeny of *Tilapiines* (Cichlidae: Labroidei) Derived from RAPD Markers**
*W.W. Mwanja, L. Kaufman, M. Chandler, P.A. Fuerst

195 **Microgeographic Differentiation in Savannah Sparrows (*Passerculus sandwichensis*): A Simple Solution to an Old Problem?**
*C.R. Freeman-Gallant

196 **A Time-Space Series of Evolutionary Change in an Introduced Species: North American *Drosophila subobscura***
*G.W. Gilchrist, J. Balanya, R. Huey, L. Serra

197 **Patterns of Hybridization Between Two Species of *Piriqueta* in Central Florida**
*L. Martin

198 **Resolving the *Anastrepha fraterculus* (Diptera, Tephritidae) Species Group Through Different DNA Markers**
P. Santos, *S.R. Matioli

199 **Spatio-Temporal Distribution of Sympatric Smelt Larvae Populations in an Estuarine Contact Zone Assessed By mtDNA Variation**
*D. Pigeon, J.J. Dodson, L.Bernatchez

200 **Comparison of Genotype Specific Survival Due to Developmental Rate Differences in the Teleost *Fundulus heteroclitus* : A Simulation Model Approach**
*E.G. Williamson, L. DiMichele

201 **Cospeciation and Multiple Colonization of Hosts in Brood Parasitic Birds: Multiple Origins of a Biological Species**
*M. Sorenson, R.B. Payne

202 **Host Specialization in the *Tomoplagia incompleta* Species Group (Diptera: Tephritidae)**
P.I.K.L. Prado, *V.N. Solferini, T.M. Lewinsohn

203 **How Many Fathers in a Fruit? A Method Using Gametophytic Self-Incompatibility**
*T. Vision

204 **DNA Sequence Variation at an Allozyme Locus**
*A.S. Costa, R.S. Burton

205 **The Mariner Transposable Element: Frequency and Distribution in Natural Populations of *Drosophila simulans***
*A.L. Russell, R.C. Woodruff

206 **Transposable Elements and Aging in *Drosophila*: New Data from Mariner and Hobo**
*A.G. Nikitin, R.C. Woodruff

207 **Characterization of Transposable Element Activity in Heterochromatin: The P-Element of *Drosophila melanogaster***
*B.S. Haller, R.C. Woodruff

208 **Genomic Complements of P Transposable Elements in Wild Australian *Drosophila melanogaster* Flies**
*M. Itoh, R.C. Woodruff, I.A. Boussy

209 **Evolution of the Mammalian Sperm Receptor Gene, Zona Pellucida 3, in the Genus *Mus***
*S. Jansa, B. Lundrigan, P. Tucker

210 **Intraindividual Variation of the Rrn18 (18S rRNA) Gene in North American Sturgeon (Acipenseridae: Acipenseriformes)**
*J. Krieger, T. Cavender, P.A. Fuerst

211 **Maternal Effect Inheritance of Transposable Element Self-Repression**
*M. Leone, M. Itoh, I.A. Boussy

212 **Duplication of the Mammalian Sex-Determining Locus, *Sry*, in African Murine Rodents**
*B. Lundrigan, P. Tucker

213 **Evolution, Phylogenetic Utility of Major Molecular Features in the Vertebrate Mitochondrial Genome**
*J.R. Macey, A. Larson, N.B. Ananjeva, Z. Fang, T.J. Papenfuss

214 **Molecular Evolution of Lepidopteran Pheromone-Binding Proteins**
*T.J.S.Merritt, J.Quattro, R.G.Vogt

215 **The Molecular Clock Revisited: Rates of Protein and Mitochondrial DNA Evolution as Revealed By Panamanian Snapping Shrimp**
*C.L. Morrison

216 **The Phylogenetic Relationship of Cetacians and Artiodactyls**
*B.M Ursing

217 **Patterns of Evolutionary Rate Heterogeneity in Vertebrate Mitochondria: Distinguishing Between Lineage and Gene Effects**
*D. Weinreich

218 **Evolution of Leaf Shape Polymorphism in Ivyleaf Morning Glories**
K.L. Bright

219 **Reproductive Ecology and Population Genetics of *Manfreda brachystachya* (Agavaceae)**
*L.E. Eguiarte, J. Golubov, M.C. Mandujano, A. Silva

220 **Genetic Analysis of Microsatellite Loci in the Mound-Building Mouse, *Mus spicilegus*, Reveals Multiple Parentage Within Mounds**
*J.C. Garza, D. Duryadi, P. Boursot, S. Gerasimov, H. Croset, J. Dallas

221 **Ecological Genetics of Jaw Morphology in Sheepshead Minnows (*Cyprinodon variegatus*) from Everglades National Park**
*C.L. Holtmeier

222 **Reproductive Isolation Between Locally Adapted Sympatric Aphid Populations: Prelude to Speciation?**
*S. Via

223 **The Genetic Mechanism of Sex Determination in the Androdioecious Flowering Plant, *Datisca glomerata* (Datiscaceae)**
*D.E. Wolf, L.H. Rieseberg, S. C. Spencer

224 **Host Migration and Disease Dynamics: Interactions Between Monarch Butterflies (*Danaus plexippus*) and a Protozoan Parasite (*Ophryocystis elektroscirrha*)**
*S. Altizer

225 **Pollen Removal and Maternal Sex Affect the Probability of Entering the Pistillate Phase in Hermaphroditic Flowers of the Gynodioecious Species, *Lobelia siphilitica* L. (Lobeliaceae)**
*D.A. Dudle, A. Cravens

226 **Temporal Fluctuations in Density and Diversity of Small Mammals in an Insular Patch of Oldfield Habitat**
*L.J. McLellan

227 **Spatial Variation in Clonal Growth and Seedling Recruitment in a Tropical Understory Bromeliad, *Aechmea magdalenae***
*A.C. Villegas

228 **Historical Demography and Genetic Population Structure of the Greenfinch, *Carduelis chloris* : An Analysis of mtDNA Sequences**
*J. Merila

229 **Genetic Diversity and Population Dynamics in Malaria Parasites: An Evolutionary Analysis of the Strain theory of Malaria Transmission**
*O.L.H. Branch,*A.A. Escalante, *A.A. Lal

230 **The Coalescent Time in the Presence of Background Selection**
*R.B. Campbell

231 **Interpopulation Variation in *Lupinus perennis*, the Wild Lupine**
*C. Cartwright, H.J. Michaels

232 **Mitochondrial Diversity at the Threshold of Speciation: The Hawaiian Honeycreepers as a Model System**
*R.A. Feldman, L.A. Freed, R.L. Cann

233 **Transposon Load in a Long-Term Parthenogen: Bdelloid Rotifers**
*A.P. Fagen, M.S. Meselson

234 **Stepwise Chromosome Evolution of *Drosophila albomicans***
Y. Yu, *H. Chang

235 **Variability of NOR-Bearing Chromosomes in the Genus *Gymnotus* (Pisces, Gymnotoidei)**
*F.M.C. Fernandes-Matioli, L.F. Almeida-Toledo, S.A. Toledo-Filho

236 **Selection on the Color Polymorphism of the Hawaiian Happy-Face Spider: Many Ways to Make a Face**
*R.G. Gillespie, G.S. Oxford

237 **Nuclear-Mitochondrial Coadaptation: Cytochrome Oxidase Activity in *Tigriopus californicus***
S. Edmands, *D.A. Guay, R.S. Burton

238 **Genetic Variation increased By Cluster of New Mutations: Effects on Peak Shifts**
*H. Huai, R.C. Woodruff

239 **Hierarchical Genetic Population Structure in Two Species of Spiny Rats, Genus *Proechimys*, from Western Brazil**
*M.D. Matocq, M.N.F. da Silva, J.L. Patton

240 **Breeding System and Pollinator Limitation of Prairie Lupine**
*H.J. Michaels

241 **Temporal Changes in Population Structure in *Strongylocentrotus purpuratus* Based on Resampling of Allozyme and DNA Markers**
*P.E. Moberg, R.S. Burton

242 **Examination and Characterization of Nucleotide Polymorphism and Evolution of the Decapentaplegic Gene in *Drosophila***
*B.G. Richter, E. Nitasaka, R.C. Lewontin

243 **Genetic Similarity and Host Utilization by *Tomoplagia* Species (Diptera: Tephritidae)**
*V.N. Solferini, P.I.K.L. Prado, T.M. Lewinsohn

244 **Subdivision in the Population Genetics of *Arabidopsis thaliana***
*E. Stahl, M. Kreitman

245 **Genetic Partitioning Within and Among Populations of *Peromyscus* from the Yukon Territories and Southeastern Alaska**
*M.J. Wike, S.A. Berend, S.R. Engel, K.M. Hogan, S.K. Davis, I.F. Greenbaum

246 **Evolution of Troglobitic Cixiid Planthoppers on Hawaii**
*K.E. Williamson

247 **Spontaneous Clusters of Premeiotic Mutation Are Common in Multicellular Organisms and Can influence Estimations of Mutation Rates**
*R.C. Woodruff, H. Huai, J.N. Thompson, Jr

248 **Applications of Microsatellite Markers to the Population Genetic Studies of Haplochromine Cichlid Fishes in Lake Victoria Basin**
* L. Wu, M. Chandler, L. Kaufman, P. Fuerst

249 **Quantitative Genetics and the Maintenance of Variation in Life History Traits in *Drosophila melanogaster***
*K.A. Hughes, B. Charlesworth

250 **Genomic Mapping of Average Effect QTL in Loblolly Pine**
*D.M. O'Malley, B.S. Crane, S.E. McKeand, R.R. Sederoff

251 **Phenotypic Correlation Between Toxicity and Color Variation in the Convergent Ladybird Beetle**
*D. Dees, D.K. Price

252 **Quantitative Genetics of Anesthesia and Behavior in the Nematode *Caenorhabditis elegans***
B. van Swinderen, M. Crowder

253 **Polyphyly of Tetrasporalean Algae (Chlorophyta: Chlorophyceae) and their Phyletic Relationship to the Filamentous Orders Chaetophorales and Oedogoniales inferred from the Rrn18 (18S rRNA) Gene**
*G. Booton, G. Floyd, P. Fuerst

254 **Germplasm Characterization of Wild South American *Phaseolus* Species Based on Aflps**
*A.L. Caicedo, M.C. Duque, E. Gaitan, O. Toro, D. Debouck, and J. Tohme

255 **Molecular Systematics of California Limpets (Patellogastropoda: Lottiidae)**
*J. Clabaugh, C.G. Wray, D.R. Lindberg, D.K. Jacobs

256 **The Evolution of Monandry in Damselflies: Toward a Reconstruction of the Ischnuran Phylogeny**
*V.K. Dave, J.V. Robinson

257 **Is there an African or an Asian Origin for Human Y Chromosome YAP Haplotype 3?**
T.K. Altheide, M.F. Hammer

258 **Semi-Automated Fluorescent Genotyping: A New Approach to RAPDs Analysis**
O. Hanotte, *A. Lowe, A. Teale, J. Hanson

259 **A Molecular Phylogeny of the Subfamily Arundinoideae (Poaceae) Based on Sequences of rDNA (ITS)**
*C. Hsiao, S.W.L. Jacobs, N.P. Barker, N.J. Chatterton

260 **Phylogenetic Divergence of Cassidine and Hispine Beetles (Coleoptera) inferred from mtDNA Sequence Data**
*T.H. Hsiao, D.M. Windsor

261 **Identifying Population-Diagnostic Microsatellite Loci in a Baboon Hybrid Zone**
*T. Woolley-Barker, C.J.J. Jolly, J.E. Phillips-Conroy, J. Rogers

262 **Genetic Differentiation in the Endemic Hawaiian Genus *Labordia* (Loganiaceae), Based on RAPD Markers**
*T.J. Motley, G.D. Carr, C.W. Morden

263 **Proposed Phylogeny for 20 Described Taxa of the Snubnose Darter, Subgenus *Ulocentra* (Percidae: Perciformes), as inferred from mtDNA Control Region Sequence and Morphological Data**
*B.A. Porter, T.M. Cavender, P.A. Fuerst

264 **Molecular Phylogenetics of Aphid Parasitoids (Hymenoptera: Aphidiidae) Based on DNA Sequence of Mitochondrial Genes**
*P.T. Smith, S. Kambhampati

265 **Molecular Phylogeny of the Miletinae (Lepidoptera: Lycaenidae) inferred from COI and EF1-a Sequence Data**
*K. Sommer, N. Pierce

266 **Phylogeny, Taxonomy of *Acanthamoeba* Species (Protozoa: Amoebida) Based on Small Subunit rRNA Gene Sequences**
*D.R. Stothard, R.J. Gast, D.R. Ledee, J.M. Schroeder-Diedrich, T.J. Byers

267 **What is an Adaptive, Environmentally Induced Parental Effect in Plants?**
*E.P. Lacey

268 **Recognizing the Forest for the Trees: Testing Temporal Patterns of Cladogenesis Using a Null Model of Random Diversification**
*K. Wollenberg, J. Arnold, J.C. Avise

269 **Nuclear Ribosomal ITS Sequence Variation in the Fern Family Osmundaceae**
*E.A. Zimmer, J.A. Sweere, D. Stein

270 **Variation in Seedling Structure and Consequences for Growth Form Evolution in the Type Subgenus of *Pelargonium* (Geraniaceae)**
*C.S. Jones, R.A. Price

271 **High-Level Phylogeny of the Passion-Vine Butterflies (Nymphalidae: Heliconiinae)**
*C.M. Penz

272 **Phylogenetic Relationships Among Loliginid Squids (Cephalopoda: Loliginidae): Evolutionary and Biogeographical Implications**
*F.E. Anderson

273 **A Method for Cladistic Confidence Limits Yields Congruence of Morphological and Macromolecular Phylogenies for Platyrrhini (New World Monkeys)**
*R.S. Corruccini, S.M. Ford

274 **Evolution of the Endemic Hawaiian Sap Beetles (Coleoptera:Nitidulidae): Host Plant Utilization and the Origins of Wing Reduction (Brachyptery)**
*C.P. Ewing

275 **Phylogenetic Studies of Pea and Its Close Relatives**
*N.O. Polans, B.K. Hoey, D.M. Barnes, J.A. Nelson

276 **Convergent Evolution of Trophic Specializations Within the Endemic Tanganyikan Cichlid Tribe Eretmodini, Inferred from mtDNA Sequences**
*L. Ruber, A. Meyer, E.Verheyen

277 **Early Post Glacial Biogeography of the Queen Charlotte Islands Based on Molecular Phylogenies of Vertebrates**
*S.A. Byun, B.F.K. Koop, T.E. Reimchen

278 **Biogeography, Evolution of *Mastigias* sp. and *Aurelia* sp. (Cnidaria: Scyphozoa) in the Palau Archipelago, Micronesia**
*M.N. Dawson

279 **Cladistic Biogeography of *Eusattus muricatus* (Coleoptera, Tenebrionidae) in the Basin and Range Province of Western North America**
*T.Epps, H. Britten, R. Rust

280 **Investigating a Biogeographic Paradox in the New Zealand Herpetofauna: New Evidence from Mitochondrial Genes of Tuatara (*Sphenodon*) and Lizards (*Hoplodactylus* and *Oligosoma*)**
*J.M. Hay, L.R. Maxson

281 **Repeated Trans-Arctic invasions in Littoral Bivalves**
*R. Vainola

282 **Origin of an Unusual mtDNA Polymorphism in Endemic Populations of Threespine Stickleback from the Queen Charlotte Islands: Geographic Distribution and Nuclear DNA Data**
*B.E. Deagle, T.E. Reimchen, B.F. Koop

283 **TREEBASE: A Relational Database of Phylogenetic Knowledge**
*W. Piel, M. Donoghue, T. Eriksson, C. Henze, K. Rice, M. Sanderson.

284 **Phylogenetic Analysis of Correlated Character Evolution, with an Example from Squirrels**
*D.L. Swiderski

285 **Resolving Uncertainty in Ancestral Character State Reconstruction Methods: A Simulation Study of Character Displacement in Lesser Antillean *Anolis***
*M.A. Butler, J.B. Losos

286 **Development and Evolution of Pigmentation Patterns in Relation to Size and Shape Change in Fishes of the Genus *Danio* (Teleostei: Cyprinidae)**
*M. McClure

287 **Identification of Quantitative Morphometric Characters in the Canid Skull Using Hierarchical Factor Analysis**
*W. Stevens

288 **Larval Learning, Memory Retention through Metamorphosis in *Drosophila melanogaster***
*R. Bailey, K.L. Lofdahl

289 **Influence of Natural Selection on Color and Food Learning in *Drosophila melanogaster***
*A. Biggs, K.L. Lofdahl

290 **Possible Role of Endosymbionts in Aphid Ability to Overcome Plant Resistance: Evidence from Genetic and Behavioural Studies**
*C.M. Caillaud, B. Chaubet

291 **The Evolution of Nest-Building Behavior in Parrots**
*J.R. Eberhard

292 **Evolution of Ambush Predation in the Hawaiian Pug Moth, *Eupithecia* (Lepidoptera, Geometridae).**
*M.L. Heddle, E.C. Metz, S.L. Montgomery, G.K. Roderick

293 **Genetics of Adaptive Learning in *Drosophila melanogaster*: Chromosome Analysis**
*Y. Shin, K.L. Lofdahl

294 **Strong Selection Cannot Overcome the Effects of Gene Flow in Experimental Populations of *Drosophila melanogaster***
*E.E. Hostert

295 **Effects of Maternal Age and Size on Egg Number, Size, and Viability in the House Fly (Diptera: Muscidae)**
*G.S. McIntyre, R.H. Gooding

296 **Evolution of Freshwater Adaptation: Physiological Changes During Habitat Transitions**
*Carol Eunmi Lee

7:00-?? **Barbeque** (for meal plan participants)

Friday, 21st June: Morning

8:25-12:00 Brown 100
Symposium 3 Morphological Data in Phylogenetic Analysis: Recent Progress and Unresolved Problems
Organizer: John Wiens

8:25 **Introduction to the Symposium**
*J. Wiens

8:30 297 **Morphology Versus Molecules: A Decade Later**
*D.M. Hillis

9:00 298 **Phylogenetic Analysis of Morphometric Data**
*M.L. Zelditch, W.L. Fink

9:30 299 **Phylogenetic Analysis using Polymorphic Morphological Characters: Inferences from Empirical and Simulated Data Sets**
*J. J. Wiens

10:00-10:30 Break

10:30 300 **Hybridization and Phylogenetic Analysis of Morphological Data**
*L. McDade

11:00 301 **Using Fossils in Phylogenetic Analysis**
*J. Huelsenbeck

11:30 302 **Biases Associated with Including and Excluding the Characters of Interest During Tree Reconstruction and Their Implications for the Study of Morphological Character Evolution**
*K. deQueiroz

12:00-1:30 Lunch
SSB Business Meeting

Friday, 21st June: Morning I

8:30-10:00 McDonnell 162
Session 25 Life Histories and Development
Chair: Susan Lawler

8:30 303 **Quantitative Genetic Structure of Life History in *Drosophila melanogaster*: Comparisons Among Populations**
*P.M. Service

8:45 304 **Time Constraints and Life History Transitions in *Drosophila melanogaster***
*L. Rowe, D. Houle

9:00 305 **An Adaptive Landscape of Sex: Sexual Dimorphism, Sexual Antagonism, and Constraints upon Adaptation to Environmental Stress in *Drosophila***
*A. Chippindale

9:15 306 **Artificial Selection for Development Time and the Correlated Response in the Ribosomal Genes of *Drosophila hydei***
*S. Lawler

9:30 307 **A Test of the Reproductive Effort Model with *Drosophila melanogaster***
*S.C. Stearns, M. Kaiser

9:45 308 **The Trade-off Between Migratory Ability and Mate Attraction in the Sand Cricket, *Gryllus firmus***
*P. Crnokrak, D.A. Roff

10:00-10:30 Break

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Rebstock 215

8:30-10:00 **Session 26 Molecular Systematics**
Chair: Dahnait McHugh

8:30 309 **Phylogenetic Relationships of Annelids and Other Protostome Worms Inferred from Elongation Factor-1a Sequence Data**
*D. McHugh

8:45 310 **Seeking Molecular Signatures of Ancient Apomixis in Aphids (Tribe Tramini) Using Sequences of a Single-Copy Nuclear Gene (Elongation Factor 1-a)**
*B. Normark

9:00 311 **Resolving Arthropod Phylogeny Using Multiple Nuclear Genes**
*J.C. Regier, J.W. Shultz

9:15 312 **Polyploidy, Gene Trees, and Species Definitions**
*B.K. Mable

9:30 313 **Evolution of Duplicated Growth Hormone Introns in Salmonid Fishes and Implications for Systematic Analysis**
*T.H. Oakley, R.B. Phillips.

9:45 314 **Sampling Properties of Model Parameters in Phylogenetic Analyses of DNA Sequences**
*J. Sullivan, D. Swofford

10:00-10:30 Break

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Wilson 112

8:30-10:00 **Session 27 Geographic Variation and Hybrid Zones**
Chair: Adam Porter

8:30 315 **Population Genetic Structure of *Dreissena polymorpha* (Mollusca) 4 Years After the Unification of the Rhine and Danube Populations by the Rhine-Main-Danube-Canal**
*A. Seitz, S. Woell

8:45 316 **A Cladistic Measure of mtDNA Gene Flow in a Baboon (*Papio hamadryas* spp.) Hybrid Zone, Central Ethiopia**
*T.K. Newman, C.J. Jolly, T.R. Disotell, J. Phillips-Conroy, F.L. Brett

9:00 317 **Differential Introgression of Marker Alleles Across Two Butterfly Hybrid Zones**
*A. Porter, M. Loertscher, R. Wenger

9:15 318 **Hybridization and the Spread of Viviparity in the Western European *Salamandra* Complex**
*M. Garcia-Paris, M. Alcobendas, P. Alberch

9:30 319 **Natural Selection on Hybrids Between Locally Adapted Annual Plants**
*E.S. Nagy

9:45 320 **Hybrid Vigor of Carpobrotus (Aizoaceae) in Coastal California: Implications for Successful Invasion by Intermediate Morphotypes**
*M. Vila, C.M. D'Antonio

10:00-10:30 Break

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January 110

8:30-10:00 **Session 28 Host-Parasite Interactions**
Chair: Steven Johnson

8:45 322 **Asymmetry and Parasites in Stickleback**
*T.E. Reimchen

9:00 323 **Effects of Major Histocompatibility Complex (MHC) Variation on Parasite Burden and Fitness in an Unmanaged Population of Soay Sheep (*Ovis aries* L.)**
*S. Paterson, J.M. Pemberton

9:15 324 **Transmission Strategies in Parasitic Nematodes: Phylogeny of the Order Strongylida Based on Cytochrome c Oxidase**
*S.C. Sukhdeo, M.B. Black, R.C. Vrijenhoek, M.V.K. Sukhdeo

9:30 325 **What Are Myxozoan Parasites? Answers From 18S rRNA and Homeobox Genes**
D.M. Smith, *C.D. von Dohlen, L.H. Smith, R.D. Spall

9:45 326 **Parasitism by Trematodes and Microsporidians in Sexual and Parthenogenetic Populations of a Freshwater Snail**
*S.G. Johnson

10:00-10:30 Break

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Brown 118

8:30-10:00 **Session 29 Population Genetics**
Chair: Janet Gehring

8:30 327 **Clinal Variation, Inbreeding, and Small-Scale Genetic Structure in *Silene acaulis* Despite High Gene Flow**
*J.L. Gehring, L F. Delph

8:45 328 **Genetic Population Structure in Water Mites of the Genus *Arrenurus* with Differing Dispersal Abilities**
*A.J. Bohonak

9:00 329 **Broadscale Genetic Structure of the Coral Reef Starfish *Linckia laevigata* from the Indian and West Pacific Oceans, Including an Analysis of the Taxonomic Status of Colour Morphs**
*S.T. Williams

9:15 330 **Statistical Power of Spatial Autocorrelation Statistics for Making Inferences About Population Genetic Processes**
*B.K. Epperson

9:30 331 **Evolution of Imperfect Microsatellite Loci and Implications on Population Divergence Estimates in Charrs (*Salvelinus*)**
*B. Angers, L. Bernatchez

9:45 332 **Population Structure in a Southeastern Freshwater Fish: The Roles of Migration, History, and Selection**
*C. Baer

10:00-10:30 Break

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Rebstock 322

8:30-10:00 **Session 30 Community Ecology**
Chair: Janice Bell

8:30 333 **Species-Specific Identification of Larval Bivalves Using an 18S rDNA Probe and RFLP Analysis**
*J.L. Bell

8:45 334 **Determining the Community Structure of Sulfate-Reducing Marsh Bacteria Using 16S rDNA Probes**
* V. Dilegge, J.H. McDonald, D. Smith

9:00 335 **Interspecific Competition in Structuring Gastrointestinal Nematode Parasite Communities**
*A.D. Bansemir, M.V.K. Sukhdeo

9:15 336 **A Phylogenetic Analysis of the Effect of Habitat on Sexual Dimorphism in Caribbean *Anolis* Lizards**
*M.A. Butler

9:30 337 **Herbivore Communities on Individual Trees: How Consistent are Selective Presssures by Herbivores through Time?**
*S.Y. Strauss, L.R. Fox, P.A. Morrow, M.W. Schwartz

9:45 338 **cancelled**

10:00-10:30 Break

Friday, 21st June: Morning II

McDonnell 162

10:30-12:00 **Session 31 Life Histories and Development**
Chair: Kelly Zamudio

10:30 339 **cancelled**

10:45 340 **Life History Patterns between and within Species of Horned Lizards (Genus *Phrynosoma*)**
*K.R. Zamudio

11:00 341 **Hoxa11 Expression in *Xenopus* Limb Development: Evidence for Developmental Repatterning in the Origin of Anurans**
*M.J. Blanco, B.Y. Misof, G.P. Wagner

11:15 342 **A Test for Heritable Variation in Plasticity of Size at and Time to Metamophosis**
*L.M. Turek, S.A. Juliano

11:30 343 **Low Heritabilities of Life History Traits**
*R. Podolsky, S. Tonsor

11:45 344 **Quantitative Life History Differences of the Ozark Sculpin, *Cottus hypselurus***
*T. Cooney

12:00-1:30 Lunch SSB Business Meeting

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Rebstock 215

10:30-12:00 **Session 32 Molecular Systematics**
Chair: Katharina Noack

10:30 345 **The Complete Nucleotide Sequence of the Mitochondrial Genome of the Most Basal Living Bony Fish, *Polypterus ornatipinnis***
*K. Noack, R. Zardoya, A. Meyer

10:45 346 **Evolutionary Conservation of Microsatellite Loci and the Phylogeny of Cichlid Fishes**
*A. Meyer, R. Zardoya, D. Vollmer, C. Craddock, T. Streelman, S. Karl

11:00 347 **Evolution of the Rockfishes (Cichlidae) of Lake Malawi: What mtDNA Can, and Can't, Tell Us**
*A. Parker, I. Kornfield

11:15 348 **The Radiation of Characiform Fishes and the Limits of Resolution of Mitochondrial Ribosomal DNA Sequences**
*G. Orti, A. Meyer

11:30 349 **Mitochondrial Sequence Changes Among Closely Related Taxa: Implications for Phylogenetic Analysis.**
*A.M. Goebel

11:45 350 **Phylogenetics of the Genus *Acris* (Anura: Hylidae) From Sequence Analysis of the Cytochrome b Gene**
*D.S. Moore, K.R. Marion, S.F. Michael

12:00-1:30 Lunch SSB Business Meeting

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Wilson 112

10:30-12:00 **Session 33 Geographic Variation and Hybrid Zones**
Chair: Barry Chernoff

10:30 351 **A Natural Experiment in Transposable Element Population Dynamics in Australian *Drosophila melanogaster***
*I A. Boussy, R.C. Woodruff

10:45 352 **Comparative Membrane Phospholipid Profiles From Host and Symbiont Tissues of Hydrothermal Vent and Hydrocarbon Seep Tube Worms (Pogonophora: Obturata=Vestimentifera)**
*L. Bardygula-Nonn, M.B. Black, R.C. Vrijenhoek T. Glonek

11:00 353 **Measuring the Transformation of Covariance Structures: Analyses of Geographic Variation and Hybridization**
*B. Chernoff, T.M. Bert, D.J. Miller

11:15 354 **Maximum Likelihood Estimation of Migration Rates Using Coalescent Trees and Its Performance**
*P. Beerli

11:30 355 **The Effect of Overlapping Generations and Population Structure on Gene-Frequency Clines**
*O.E. Gaggiotti, C.E. Lee, G.M. Wardle

11:45 356 **A Window Into Speciation Processes: Geographic Variation and Hybridization in Hard Clams (Genus *Mercenaria*)**
*T.M. Bert, W.S. Arnold

12:00-1:30 Lunch SSB Business Meeting

January 110

10:30-12:00 **Session 34 Molecular Evolution**
Chair: Adam Eyre-Walker

10:30 357 **Correlated Rates of Synonymous Site Evolution Across Plant Chloroplast, Mitochondrial and Nuclear Genomes**
*A. Eyre-Walker, B.S. Gaut

10:45 358 **Site by Site Estimation of the Rate of Substitution in Mitochondrial DNA**
*R. Nielsen

11:00 359 **Strand Differences in Non-Neutral Synonymous Evolution: Two Mutational Modes for the Mildly Deleterious Evolution of *Drosophila* Mitochondrial DNA**
*D.M. Rand, L.M. Kann

11:15 360 **The Evolution of Antigenic Mobility in Viral Capsid Proteins**
*D.T.Haydon

11:30 361 **An Improved Model of Protein Structure and Protein Evolution**
*J.L. Thorne, N. Goldman, D.T. Jones

11:45 362 **Evolution of Invertebrate Intermediate Filament Proteins**
*C.D. Watkins, M.E. White

12:00-1:30 Lunch SSB Business Meeting

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Brown 118

10:30-12:00 **Session 35 Population Genetics: Plants**
Chair: Victoria Sork

10:30 363 **Effects of Fragmentation on Pollen Movement in a Costa Rican Dry Forest**
*V.J. Apsit, J.D. Nason, J.L. Hamrick

10:45 364 **Seed versus Pollen Movement in Ponderosa and Limber Pine Estimated by Comparison of Allozymes and Organellar DNA**
*R. Latta, Y. Linhart

11:00 365 **Spatial and Temporal Patterns of Genetic Variation in Three Species of Woody Plants in Missouri Ozark Forests**
*V.L. Sork, M.A. de la Fuente, P.F. Foster, A.L. Koop, J.A. Raveill, A.R. Templeton

11:15 366 **Variation in Outcrossing Rates in Natural Populations of Swamp Milkweed (*Asclepias incarnata*)**
*C.T. Ivey

11:30 367 **Genetic Diversity in Sequences of Alcohol Dehydrogenase and Phosphoglucose Isomerase Loci of Inbreeding and Outbreeding Populations of the Plant Genus *Leavenworthia***
*F.-L. Liu, L. Zhang, D. Charlesworth

11:45 368 **Allozyme Variation and Population Genetic Structure of North American and Old World Populations of a Noxious Perennial Weed, *Sorghum halepense* (L.) Pers.: Consequences of Rapid Spread in North America**
*P.E. Arriola

12:00-1:30 Lunch SSB Business Meeting

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Rebstock 322

10:30-12:00 **Session 36 Quantitative Genetics**
Chair: Michael Dohm

10:30 369 **Epistasis As a Source of Additive Genetic Variation in Population Bottlenecks**
*J.M. Cheverud, E.J. Routman

10:45 370 **Phenotypic, Genetic, and Environmental Integration of Traits Related to Locomotor Performance in House Mice (*Mus domesticus*)**
*M.R. Dohm, T. Garland, Jr, J.P. Hayes

11:00 371 **Higher Mating Success of *Drosophila* Large Males Results from Increased Environmental Variance**
*M. Santos

11:15 372 **A Population Genetic Theory on the Evolution of Canalization**
*G.P. Wagner, G. Booth, H. Bagheri

11:30 373 **The Existence and Evolution of Endocrine Correlations in an Insect**
*A. Zera

11:45	374	**The Influence of Insect Behavior on the Evolution of Insecticide Resistance and Natural Plant Defenses** *G. Head, C.W. Hoy
12:00-1:30		Lunch SSB Business Meeting

Friday, 21st June: Afternoon

		Brown 100
1:30-2:30		**Plenary 2 SSB Presidential Address** *Michael Donoghue
2:30-3:00		Break

Friday, 21st June: Afternoon II

		McDonnell 162
3:00-5:00		**Session 37 Ecological Genetics** Chair: Paul Olson
3:00	375	**Pollination and Seed Dispersal Patterns in Bur Oak Established by Microsatellite Analysis** B.D. Dow, *M.V. Ashley
3:15	376	**Relatedness Estimation Using Microsatellite Loci** *M.S. Blouin
3:30	377	**Microsatellite Analyses of Kinship and Population Structure in a Polyembryonic Vertebrate, the Nine-Banded Armadillo (*Dasypus novemcinctus*)** *P.A. Prodohl, J. Loughry, C. McDonough, J.C. Avise
3:45	378	**Genetic Analyses of African Wild Dog (*Lycaon pictus*) Populations Using Mitochondrial DNA Control Region Sequences and Microsatellite Loci** *D.J. Girman, J. Carnahan, R.K. Wayne, E. Geffen
4:00	379	**Genetic Structure and Variability Within and Among Coexisting *Chiasticheta* (Diptera) in Relation to Population Sizes and Habitat Structure** *J. Johannesen, V. Loeschcke
4:15	380	**cancelled**
4:30	381	**Gene Flow As a Constraining Evolutionary Force: Morphological Evidence From a Stream-Dwelling Salamander** *A. Storfer, J. Cross
4:45	382	**Phenotypic Plasticity: A Quantitative Genetics Study Using *Manihot esculenta*** *P. Olson
		Rebstock 215
3:00-5:00		**Session 38 The Comparative Method** Chair: Katherine C. Kelley
3:00	383	**The Evolution of Parental Care Behavior in the Dabbling Ducks** *K.P. Johnson
3:15	384	**Are Rates of Speciation and Character Evolution Correlated?: A Test Using Phylogeny and the Parametric Bootstrap** *J. Harshman
3:30	385	**A Phylogenetically Independent Approach to Assessing the Influence of Metabolic Rate on Mammalian Life History Diversity** *N. Vasey, D.T. Rasmussen
3:45	386	**Comparative Methods Allowing for Individual Error: An Orthonormal Contrasts Method** *J. Felsenstein
4:00	387	**Testing Assumptions in Comparative Biology** *E. Abouheif, J. Reeve, D. Fairbaim
4:15	388	**The Chemical Defenses of Cryptic Prey: Quantitative Variation Within and Among Lineages of *Cicindela*** *K.C. Kelley, A.P. Vogler, A. Schilling
4:30	389	**Multivariate Evolution on a Phylogeny: A Case Study With Garter Snakes** *S.J. Arnold

4:45 390 **Evolution of Pectoral Fin Propulsion in Fishes: Kinematic Behavior, Hydrodynamic Design, and Ecology**
*J.A. Walker

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Wilson 112

3:00-5:00 **Session 39 Speciation and Cladogenesis**
Chair: Jonathon Brown

3:00 391 **Glaciation and Unequal Rates of Diversification in the North American *Enallagma* Damselflies**
*J.M. Brown, M.A. McPeek

3:15 392 **Sexual Selection and Sympatric Speciation in Sockeye Salmon (*Oncorhynchus nerka*): Phenotypic Convergence Leads to Genetic Divergence**
*J. Kevin Craig , C.J. Foote

3:30 393 **Do Mutations With Habitat-Specific Effects Favor Sympatric Speciation?**
*T.J. Kawecki

3:45 394 **Molecular Phylogenetics and Historical Biogeography of the South American Killifishes, Family Rivulidae**
*T. Hrbek, A. Larson

4:00 395 **Molecular and Behavioral Studies in an Evolutionarily Young Cyprinodon (Teleostei) Species Flock**
*U. Strecker

4:15 396 **Reconstructing Diversification of a Gastropod Species Flock: Inferences From Sequence Variation in ND1-16S mtDNA of Lavigeria From Lake Tanganyika**
*E. Michel

4:30 397 **The Importance of Ecotones to Speciation: Morphologic and Genetic Divergence Among Populations of Cameroon Rainforest Birds**
T. Smith, *R.K. Wayne, M. Bruford

4:45 398 **Spotted Cows and Polar Bears-Is There a Difference?: Domestication Defines a Pardigm for Heterochronic Speciation**
*S. Crockford

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January 110

3:00-5:00 **Session 40 Molecular Evolution**
Chair: Teri Crease

3:00 399 **Ribosomal DNA Evolution At the Population Level: Nucleotide Variation in Intergenic Spacer Arrays of *Daphnia pulex* (Cladocera: Crustacea)**
*T.J. Crease

3:15 400 **Concerted Evolution of rDNA Intergenic Spacers Among *Arabidopsis thaliana* and Its Sister Species**
*D.A. Hayworth

3:30 401 **An Active L1-Like LINE Mobile Sequence Family in Fish Genomes: Its Variation and Divergence in Death Valley Pupfishes**
*D.D. Duvernell, B.J. Turner, H.A. Wichman

3:45 402 **The Role of Gene Transfer in the Evolution of Antibiotic-Producing Microorganisms**
*P. Wiener, S. Egan, E.M.H. Wellington

4:00 403 **The Influence of Reproduction Systems and Selection on Microsatellites Allelic Distributions: Theoretical Approaches**
*S.Samadi, E.Estoup, P.Jarne

4:15 404 **A Repetitive Case of Worms: Patterns of mtDNA Genome Size Variation and Heteroplasmy in the Nematode Genus Meloidogyne**
*D.H. Lunt, L.E. Whipple, B.C. Hyman

4:30 405 **Evolution of Cytochrome Oxidase I and Cytochrome b in Ten Picidae Species (Class: Aves)**
*V.R. DeFilippis, W.S. Moore

4:45 406 **The Gamma-Globin Genes in New World Monkeys: Mechanisms of Molecular Evolution**
*C. Chiu and M. Goodman

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Brown 118

3:00-5:00 **Session 41 Population Genetics**
Chair: Laura Katz

3:00 407 **Genetic Structure and Levels of Gene Flow in Host Associated Populations of the Oligophagous Moth *Yponomeuta padellus* (Lepidoptera: Yponomeutidae)**
*L.E L. Raijmann, S.B.J. Menken

3:15 408 **Life History Strategies and the Genetic Structure of Phytophagous Insect Populations**
*M.A. Peterson, R.F. Denno

3:30 409 **Parthenogenesis in Chewing Lice and the Reduction of Selection on Male Traits**
*X. Xia

3:45 410 **Population Genetics of Incipient Speciation in Two Species of Jumping Spiders (Salticidae: Habronattus) on the Sky Islands of Southeast Arizona**
*S. Masta

4:00 411 **Evidence of Balancing Selection on Phosphoglucose Isomerase in Two Species of Field Cricket (Gryllus veletis and Gryllus pennsylvanicus)**
*L.A. Katz, R.G. Harrison

4:15 412 **Clonal Reproduction in North American Agricultural Populations of a Plant-Infecting Fungus**
* Y. Kohli, L.M. Kohn

4:30 413 **Population Genetics of Agaricus Bisporus, the Commercial Button Mushroom**
*J. Xu, J.B. Anderson

4:45 414 **Comparative Chromosomal and Plasmid Population Genetics of *E. coli* Associated With Mammals and Birds.**
*V. Souza, M. Rocha, L. Sandler, L. Eguiarte

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Rebstock 322

3:00-5:00 **Session 42 Coevolution**
Chair:Michelle Nishiguchi

3:00 415 **Divergent Selection in a Polymorphic Butterfly**
*D.D. Kapan

3:15 416 **Time-Delayed Parasite Response to Host Clone Frequency Dynamics in a Natural Population**
*M.F. Dybdahl, C.M. Lively

3:30 417 **Natural Selection on Aspects of Foraging Behavior of the Parasitoid Wasp *Cotesia glomerata* from Wild and Cultivated Host Plant Habitats**
*S. van Nouhuys

3:45 418 **Coevolution of C3 Grasses and Fungal Endophytes (*Epichloe* spp.)**
C.L. Schardl, A. Leuchtmann, *H.H. Wilkinson

4:00 419 **A Squid That Glows in the Dark: Co-Evolution Between Sepiolids and Their Bioluminescent Symbionts**
*M.K. Nishiguchi, E.G. Ruby, M.J. McFall-Ngai

4:15 420 **Plasmid Stability in Indigenous Rhizobium: a Comparative Genetic Analysis of Symbiotic and Non-Sym Loci of *R. leguminosarum* Nodulating Native Trifolium**
*J. Wernegreen

4:30 421 **Population Bottlenecks and the Evolution of Virulence**
*P. McElhany, D. Rozen, L.A. Real

4:45 422 **Evolutionary Potential of Generalists and Specialists: An Experimental Study of Host Range Expansion in Viruses**
*G. Krukonis

Friday, 21st June: Evening

5:00-6:00 Graham Chapel
Plenary 2 SSE 50th Anniversary Address
The Wilhelmine Key Lecture of the American Genetic Association,
Sponsored by the American Genetic Association
Sexual Selection: A Driver of Genetic Change in Hawaiin *Drosophila*
*Hampton L. Carson

6:00-7:00 Buses Begin to Depart for Reception at the Missouri Botanical Garden

6:30-9:00 **Reception Missouri Botanical Garden**

Saturday, 22nd June: Morning

Brown 100

8:30-12:00 **Symposium 4 Maternal Effects as Adaptation**
Organizers: Timothy Mousseau and Charles Fox

8:30 423 **Introduction to the Symposium**
*T. Mousseau, C. Fox

9:00 424 **The Evolutionary Genetics of Maternal Effects**
*M. Wade

9:30 425 **Inertial Growth: Reconsidering Foundations of Population Dynamics Based On Maternal Effect**
*L. Ginzburg

10:00-10:30 Break

10:30 426 **Are Environmental Effects a Form of Adaptive Plasticity?**
*J. Schmitt

11:00 427 **Butterfly Reproductive Decisions in Times of Global Change**
*B. Roitberg

11:30 428 **The Influence of Direct and Indirect Genetic Effects On Behavior: Sexual Selection Meets Maternal Effects.**
*A. Moore

12:00-1:30 Lunch
SSE/SSB Steering Committee Meeting

Saturday, 22nd June: Morning I

8:30-10:00 McDonnell 162
Session 43 Adaptation and Plasticity: Mostly *Drosophila*
Chair: Marc Tatar

8:30 429 **Geographic Variation in Phenotypic Plasticity of Development Time and Body Size in Response to Temperature in *Drosophila melanogaster***
* A.C. James, R.B.R. Azevedo, L. Partridge

8:45 430 **Effect of Engineering Hsp70 Copy Number on Hsp70 Expression and Tolerance of Ecologically Relevant Heat Shock in *Drosophila* Larvae and Pupae**
*M.E. Feder, R.A. Krebs, S.L. Lindquist

9:00 431 **Hsp70 Expression and Fitness in *Drosophila*: Good News and Bad**
*R.A. Krebs, M.E. Feder

9:15 432 **How Natural Thermal Stress May Ameliorate Cytoplasmic Incompatability in *Drosophila* Through Induction of Heat-Shock Proteins**
*T.L. Karr, M.E. Feder

9:30 433 **Heat-Induced Longevity Extension in *Drosophila*: the Effect of Transgenic Variation in Hsp70 Copy Number**
*M. Tatar, A. Khazaeli, J. Curtsinger

9:45 434 **The Evolution of Trophical Adaptation in the Endemic Tanganyikan Cichlid Genus *Petrochromis* as Suggested by mtDNA Sequences (Teleostei)**
*E.Verheyen, J.Snoeks

10:00-10:30 Break

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8:30-10:00 Rebstock 215
Session 44 Molecular Systematics
Chair: Gavin Naylor

8:30 435 **Mitochondrial DNA Phylogenies of Hydrothermal Vent and Hydrocarbon Seep Caridea (Crustacea:Decapoda)**
*T.M. Shank, R.A. Feldman, M.B. Black, R.A. Lutz, R.C. Vrijenhoek

8:45 436 **Molecular Systematics of Cypridinid Ostracode Crustaceans: Patterns and Evolution of Bioluminescence and Signaling Behavior**
*E. Torres, J.G. Morin, A.C. Cohen

9:00 437 **Relations and Evolution of Branchiopod Crustaceans Inferred From Partial 28S rDNA Sequence Variation**
*D. Taylor

9:15 438 **Is the Lancelet *Branchiostoma* Really Not a Chordate - Or Do We Need to Think a Little More About Extracting Phylogenetic Inferences from DNA Sequences?**
*G. Naylor, W. Brown

9:30 439 **Molecular Phylogenies Indicate the Need for Reclassification of the Large Red Algal Order Gigartinales and Highlight the Importance of Changes in Female Reproductive Characters in Its Evolution**
*S. Fredericq, J.N. Norris, E.A. Zimmer, M.H. Hommersand

9:45 440 **Protamine P1 and the Phylogeny of Dasyurid Marsupials**
*C. Krajewski, M. Westerman

10:00-10:30 Break

Wilson 112

0-10:00 **Session 45 Geographic Variation and Hybrid Zones**
Chair: Jeffrey Mitton

0 441 **Phylogeography of the *Sceloporus undulatus-occidentalis* (Reptilia: Phrynosomatidae) Species Complex Across North America: Analysis of a Preliminary Data Set**
*J. Archie

45 442 **Zoogeography of the Northern Flying Squirrel (*Glaucomys sabrinus*) Based on Analysis of Mitochondrial DNA**
*B.S. Arbogast, M.S. Hafner

00 443 **Phylogenetic Relationships and Geographic Genetic Structure in Pocket Gophers (*Thomomys bottae*)**
*M.F. Smith

:15 444 **Areas and Endemism: Reconstructing the Spatial History of the African Shrikes (Family: Laniidae)**
*N. Caithness

:30 445 **A Moving Hybrid Zone Between Native and Introduced Cervids in Scotland: The End of the Scottish Red Deer?**
* S.J.E. Baird, K. Abernethy

9:45 446 **The Distributions of *Mytilus galloprovincialis* and *M. trossulus* in the North Pacific, as Revealed by PCR Diagnostic Markers**
*J.B. Mitton, J. Geller, T. Suchanek, B.R. Kreiser

10:00-10:30 Break

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January 110

8:30-10:00 **Session 46 Molecular Evolution**
Chair: Bill Ballard

8:30 447 **Evolutionary Dynamics of Mitochondrial Genes in Birds: Analysis of 4800 Bases in a Passerine Species**
*G. Seutin, E. Bermingham

8:45 448 **Metabolism and Mitochondrial DNA Evolutionary Rates in Seabirds**
*G.B. Nunn, S.E. Stanley

9:00 449 **Molecular Evolution of the Mitochondrial DNA Control Region, and Its Use in Phylogenetic Analyses of Bufonids**
*A.M. Goebel

9:15 450 **Reduced Polymorphism in *Drosophila simulans* Mitochondrial DNA**
*J.W.O. Ballard, J. Hatzidakis, T. Karr, M. Kreitman

9:30 451 **Nuclear Localized Copies of Mitochondrial DNA:. A New Tool for Investigating Mitochondrial Evolution**
*J.L. Blanchard

9:45 452 **Models of Opsin Wavelength Shift: A Comparative Evolutionary Analysis of Invertebrate Visual Pigments**
*M.J. Brauer, B.S. Chang, K.A. Crandall

10:00-10:30 Break

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Brown 118

8:30-10:00 **Session 47 Population Genetics**
Chair: Douglas Stoner

8:30 453 **Influence of Mating System and Complex Life Histories on Effective Population Size**
*B. Milligan

8:45 454 **The Effects of Variable Mutation Rates Across Sites on the Phylogenetic Estimation of Population Size Or Mutation Rate of DNA Sequences**
*H.-W. Deng, Y.-X. Fu

9:00 455 **Mutation Accumulation in Sexual Populations with Variable Selection Coefficients**
*D. Gessler

9:15 456 **Environmental Fluctuations and Shifts Between Adaptive Peaks**
*M. Whitlock

9:30 457 **Gene Pool Estimation and Heterozygosity Fluctuation**
*Y. Lu

9:45 458 cancelled

10:00-10:30 Break

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Rebstock 322

8:30-10:00 **Session 48 Plant Mating Systems**
Chair: Naoki Takebayashi

8:30 459 **Maintenance of Variability in Anther-Stigma Separation in the Common Morning Glory, *Ipomoea purpurea***
*S. Chang

8:45 460 **Outcrossing Rates of Individual Monkeyflower (*Mimulus ringens*) Plants Are Correlated With Anther-Stigma Separation**
*J.D. Karron

9:00 461 **Is Selfing an Evolutionary Dead-End? Phylogenetic Relationships Among Populations With Selfing Rate Variations in *Gilia achilleifolia* (Polemoniaceae)**
P. Morrell, *N. Takebayashi.

9:15 462 **Temporal Variation in Self Fertilization and Familial Variation in Inbreeding Depression in Three Populations of *Collinsia verna***
*S. Kalisz, T. Holtsford, D. Thiede, K. Karkkainen, B. Black

9:30 463 **Evolution of Inflorescence Design: A Model and Experimental Test on *Asclepias tuberosa***
*M. Fishbein, D.L. Venable

9:45 464 **Incompatibility Proteins in Distylous *Turnera* spp.**
*A. Athanasiou, J.S. Shore

10:00-10:30 Break

Saturday, 22nd June: Morning II

McDonnell 162

10:30-12:00 **Session 49 Adaptation and Plasticity**
Chair: Robert Fischer

10:30 465 **Phenotypic Plasticity for Shell Morphology in a Freshwater Snail**
*A. Krist

10:45 466 **Predator-Induced Behavior, Morphology, and Life-History in a Freshwater Snail**
*T.J. DeWitt

11:00 467 **Stock Enhancement May Reduce the Evolutionary Adaptive Potential of Some Fish Species**
*M.D. Tringali, T.M. Bert

11:15 468 **The Chiropteran Calcar: Adaptation and Exaptation**
*W.A. Schutt, Jr.

11:30 469 **Thirty Years of Thermal Extremes: A Case of Rapid Evolution in Bluegill Morphology**
*R. Fischer, J. Congdon

11:45 470 **Morphological Asymmetry and Ecological Toxicity in Hispid Cotton Rats**
*J. Novak, J. Krenz

12:00-1:30 Lunch SSE/SSB Steering Committee Meeting

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Rebstock 215

10:30-12:00 **Session 50 Molecular Systematics: Mammals**
Chair: Warren Johnson

10:30 471 **Mitochondrial Evidence for Polyphyletic Origins of Extant and Extinct Domestic Dogs**
*M.L. Burbidge, S.A. Byun, S.J. Crockford, U. Rink, R.J. Wigen, B.F. Koop

10:45 472 **Phylogenetic Associations Among South American Felids**
*W.E. Johnson, S.J. O'Brien

11:00 473 **Molecular Systematics of the Central Asian Radiation of Arvicoline Rodents**
*C.W. Kilpatrick

11:15 474 **Origin of Bats: What Protein-Coding Genes From the Mitochondrial DNA Reveal**
* D.E. Pumo, P. Finamore, C.J. Phillips

11:30 475 **Comparing the Phylogenetic Informativeness of Mitochondrial and Nuclear DNA in Strepsirrhine Primates**
*A.D. Yoder

11:45 476 **Molecular Phylogenetic Analysis of mtDNA Indicates a Rapid Radiation of Leporid (Lagomorpha) Genera: A Consensus Across Methods and Data Sets**
*K.M. Halanych, T.J. Robinson

12:00-1:30 Lunch SSE/SSB Steering Committee Meeting

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Wilson 112

10:30-12:00 **Session 51 Geographic Variation and Hybrid Zones**
Chair:Angelo Chouinard

10:30 477 **DNA Sequence Variation at Cytochrome Oxidase I and Its Pseudogene Among Populations of the Marine Copepod *Tigriopus***
*R. Burton

10:45 478 **MtDNA Phylogeographic Structure in Lake Whitefish (*Coregonus clupeaformis*): Molecular Evidence for Multiple Origins of Dwarf and Normal Morphotypes in Northeastern North America**
*A. Chouinard, *D. Pigeon, L. Bernatchez

11:00 479 **The Evolutionary Significance of mtDNA Introgression Assessed by Physiological Performance in Brook Charr (*Salvelinus fontinalis*)**
*H. Glemet, P. Blier, P. Boily, L. Bernatchez

11:15 480 **Allozyme and Mitochondrial DNA Variation in the Plains Killifish, *Fundulus zebrinus***
*B. Kreiser, J. Mitton, J. Woodling

11:30 481 **Genetic Structure in Amazonian Birds: Correlates Between Morphology and DNA**
*J.M. Bates

11:45 482 **Analysis of Population Structure and Geographic Variation in a Freshwater Bryozoan With Dimorphic Dispersal Capabilites Using DNA Sequence Polymorphisms**
*A. Hunt, R.H. Karlson, J.H. McDonald

12:00-1:30 Lunch
SSE/SSB Steering Committee Meeting

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January 110

10:30-12:00 **Session 52 Molecular Evolution**
Chair: Yun-Xin Fu

10:30 483 **Stability of Heterochromatin in Rodents from Chernobyl**
*L.E. Wiggins, M.J. Hamilton, R.A. VanDenBussche, R.K. Chesser, R.J. Baker

10:45 484 **Mutation Rate in the Cytochrome B Gene of Microtus Oeconomus: A Different Pattern in a Species from Chernobyl**
*A.J. Wright, K.D. Makova, R.A. VanDenBussche, R.K. Chesser, R.J. Baker

11:00 485 **Apparent Selection at an Allozyme Locus in Three Species of Rodents from Chernobyl**
*J.A. DeWoody, D.W. Sugg, R.J. Baker, R.K. Chesser, R.A. VanDenBussche

11:15 486 **Mitochondrial DNA and Perciform Fish Systematics: Genetic Evidence for a "Carangoid" Clade and Unexpected Sequence Evolution**
*C. Reeb, B. Block

11:30 487 **Mitochondrial Length and Sequence Variation Within Human Populations of the Pacific**
*J. Koji Lum, Rebecca L. Cann

11:45 488 **Statistical Tests of Neutrality of Mutations for DNA Samples from a Population**
*Y.-X. Fu

12:00-1:30 Lunch SSE/SSB Steering Committee Meeting

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Brown 118

10:30-12:00 **Session 53 Population Genetics**
Chair:John Benzie

10:30 489 **Patterns of Gene Flow among Giant Clam (*Tridacna* spp) Populations throughout the Western Pacific do not Match Present-Day Patterns of Ocean Circulation**
*J.A.H. Benzie

10:45 490 **Allozyme-Associated Heterotic Effects on Growth and Survival in the Marine Bivalve *Spisula ovalis* L.**
*P. David, B. Delay, P. Jarne

11:00 491 **Selection on Allozyme Loci in the Zebra Mussel (*Dreissena polymorpha*)?**
*K. Lewis, R.M. Bruckert, J.L. Feder

11:15 492 **A Comparison of Mitochondrial and Nuclear Gene Genealogies in the American Oyster**
*M.P. Hare, J.C. Avise

11:30 493 **Are Gene Genealogies Concordant Across Loci, Within and Among Horseshoe Crab Species?**
*G. Orti, J.C. Avise

11:45 494 **Pattern and Processes of Genetic Differentiation in Japanese Eel *Anguilla japonica* (Temminck and Schlegel)**
*I.K.K. Chan, D.K.O. Chan, S.C. Lee, K. Tsukamoto

12:00-1:30 Lunch SSE/SSB Steering Committee Meeting

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Rebstock 322

10:30-12:00 **Session 54 Plant Mating**
Chair: Mitch Cruzan

10:30 495 **Natural Selection on Seed Size in the Common Morning Glory, *Ipomoea purpurea***
*L. Mojonnier

10:45 496 **Mating Locus Effects on Pollen Fertility in the Distylous *Piriqueta carolinana***
*M. Cruzan

11:00 497 **Pollen Production Is Not Maintained as an Attractant for Pollinators in Females of Cryptically Dioecious *Thalictrum pubescens***
*S.L. Davis

11:15 498 **Paternity Analysis for *Yucca filamentosa* (Agavaceae): Implications for Maintenance of a Mutualism**
*L.K. Massey, J.L. Hamrick

11:30 499 **Response to Selection on Gender in the Aelfing Annual, *Spergulariamarina* (Caryophyllaceae)**
*V.A. Delesalle, S.J. Mazer

11:45 500 **Ecological and Genetic Evidence for the Evolutionary Transition From Gynodioecy to Dioecy in Wild Strawberry (Fragaria virginiana)**
*T-L. Ashman

12:00-1:30 Lunch SSE/SSB Steering Committee Meeting

Saturday, 22nd June: Afternoon

Brown 100

1:30-5:00 **Symposium 5 Geneological Approaches to the Study of Phylogenetic Processes**
Organizer: Jody Hey

1:30 501 **Sampling Ancient Genealogies - with Examples from *Drosophila***
*J. Hey

2:00 502 **The Genetics of Speciation in Caribbean *Drosophila***
*H. Hollocher

2:30 503 **Estimating Ancestral Population Sizes**
*J. Wakely and J. Hey

3:00-3:30 Break

3:30 504 **Nucleotide Polymorphism in Maize and its Wild Relatives**
*B.S. Gaut

4:00 505 **Recombination, Population Structure, and Speciation in Bacteria**
*K. Nelson

4:30 506 **Networks in Genealogical Relationships and Hypothesis Testing**
*K.A. Crandall

Saturday, 22nd June: Afternoon I

McDonnell 162

1:30-3:00 **Session 55 Evolution of Sex and Recombination**
Chair: Alan Parman

1:30 507 **The Evolution of Allometry for Sexual Size Dimorphism: An Example of Constraint?**
*D.J. Fairbairn

1:45 508 **Sex Allocation in Slavemaking Ants: A Critical Test of Kin Selection Theory**
*J.M. Herbers, R.J. Stuart

2:00 509 **Cycling, Polymorphism, and Disequilibria When Cytonuclear Selection Differs Between the Sexes**
*M.A. Asmussen, C.S. Babcock

2:15 510 **The Good, the Bad and the Sexual : The Maintenace of Sexuality in Infinite and Finite Populations Under Variable Selection.**
*B. Stevens, D. Houle

2:30 511 **Optimal Variance in a Fluctuating Environment: An Immediate Benefit for Sex**
*A.O. Parman

2:45 512 **cancelled**

3:00-3:30 Break

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Rebstock 215

1:30-3:00 **Session 56 Molecular Systematics: Plants**
Chair: Steve Wagstaff

1:30 513 **Phylogeny and Character Evolution in *Labiatae* S. L. Inferred From cpDNA Sequences**
*S.J. Wagstaff, L. Hickerson, R. Spangler, P.A. Reeves, R.G. Olmstead

1:45 514 **NrITS Evolution and *Nicotiana* (Solanaceae) Systematics**
*T.P. Holtsford, A. Ippolito

2:00 515 **Potential Utility of the Nuclear Gene *waxy* for Plant Phylogenetic Studies, with Examples from the Poaceae**
*R.J. Mason-Gamer, E.A. Kellogg

2:15 516 **Molecular Evidence for the Age of the Hawaiian Silversword Alliance (Compositae)**
*B.G. Baldwin, M.J. Sanderson

2:30 517 **Plant Ribosomal Pseudogenes, Recombination, and Phylogenetic Implications**
*E.S. Buckler, T.P. Holtsford

2:45 518 **Phylogenetic and Biogeographic Analyses of *Corylus* and *Staphylea*, Two Intercontinental Disjunct Plant Genera in the North Temperate Region**
*J. Wen

3:00-3:30 Break

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Wilson 112

1:30-3:00 **Session 57 Sexual Selection**
Chair: Kerry Shaw

1:30 519 **Do Discriminating Females Search Longer for Mates?**
*W.E. Wagner Jr., K.E. Benson

1:45 520 **Sexual Communication in a Hawaiian Cricket (*Laupala cerasina*): Are Signal and Receiver Preference Coupled?**
*K.L. Shaw

2:00 521 **Strength and Direction of Sexual Selection on Ultrasonic Advertisement Signals in the Lesser Wax Moth (*Achroia grisella*, Pyralidae: Lepidoptera)**
*Y. Jang, M.D. Greenfield

2:15 522 **Bioluminescent Click Beetles in the Genus *Pyrophorus* (Coleoptera: Elateridae)**
*U. Stolz, S. Kappe, K. Wood, J.L. Feder

2:30 523 **Phylogenetic Tests of Alternative Intersexual Selection Mechanisms: Trait Macroevolution in a Polygynous Clade of Birds (Aves: Pipridae)**
*R.O. Prum

2:45 524 **Horned Beetles Exhibit Plastic Allometry**
*D.J. Emlen

3:00-3:30 Break

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January 110

1:30-3:00 **Session 58 Molecular Evolution: Nuclear Genes**
Chair: Scott V. Edwards

1:30 525 **Non-Clock-Like Evolution at Silent Sites of the MHC Class II DRA/B Loci of Mammals**
*S.V. Edwards, K. Chestnut, E.K. Wakeland

1:45 526 **Evolutionary Comparisons Between *Zfx* and *Zfy* in Felidae**
*J. Pecon Slattery, S.J. O'Brien

2:00 527 **Relaxed Selection on Beta-Globin Genes in Antarctic Fish (Notothenioidei, Teleostei) and the Evolution of Hemoglobinless Icefish**
*L. Bargelloni, S. Marcato, T. Patarnello

2:15 528 **Molecular Evolution of the *hedgehog* Gene Family**
*R. Zardoya, E. Abouheif, A. Meyer

2:30 529 **Evolution of the Small Subunit *rubisco* Gene Family in the Plant Family Solanaceae**
*A. Colwell, R.G. Olmstead

2:45 530 **Molecular Evolution of Microbial Degradative Pathways**
*M.S. Roberts, M.Maeda, T.Kudo, L.J. Forney

3:00-3:30 Break

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Brown 118

1:30-3:00 **Session 59 Ecological Genetics: Plants**
Chair: Ann Evans

1:30 531 **Temporal Variation in Selection in *Ipomopsis longiflora*, a Chihuahuan Desert Annual**
*G. LeBuhn

1:45 532 **Phenotypic and Genetic Differences Among *Lesquerella fendleri* (Brassicaceae) Plants that Differ in Germination Behavior**
*A.S. Evans, R.J. Cabin, R.J. Mitchell

2:00 533 **Seed Bank Influences on Genetic Structure in a Rare Annual: *Clarkia springvillensis***
*K.A. McCue, T.P. Holtsford

2:15 534 **Life History Differences Between Rare and Common Plant Species**
*S.G. Hegde, N.C. Ellstrand

2:30 535 **The Effective Size of Spatially-Structured Plant Populations**
*L. Nunney

2:45 536 **Fitness Consequences of Non-Local Transportation of Native Plants: Preliminary Studies in *Lotus scoparius***
*A. Montalvo, N. Ellstrand

3:00-3:30 Break

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Rebstock 322

1:30-3:00 **Session 60 Maternal Effects as Adaptation**
Chair: Charles Fox

1:30 537 **Maternal Effects and Amphibian Evolution**
*J. Bernardo

1:45 538 **Maternal Effects on the Body Size and Growth Rate of Juvenile Salmon**
*D.D. Heath

2:00 539 **Effects of Maternal Density on offspring Size in the Least Killifish: Consequences for Survival and Development**
*H. Rodd, J.W.Leips

2:15 540 **Effects of Male Genetic Contribution and Paternal Investment on Egg and offspring Size in the Cricket, *Gryllus firmus***
* L. Weigensberg, Y. Carriere, D. Roff

2:30 541 **Maternal Effects, Indicator Traits and the Evolution of Mate Choice**
*J.B. Wolf, A.J. Moore, E.D. Brodie III

2:45 542 **Genetics of Maternal Effects in *Nemophila menziesii***
*D.L. Byers, R.G. Shaw

3:00-3:30 Break

Saturday, 22nd June: Afternoon II

McDonnell 162

3:30-5:30 **Session 61 Combined-Data Systematics**
Chair: Jack Sites

3:30 543 **Combined-Data Phylogeny and Evolution of Mating Calls in Frogs of the *Physalaemus pustulosus* Group**
*D. Cannatella, P. Chippindale, D.M. Hillis, A.S. Rand, M.J. Ryan

3:45 544 **Detection of sympatric sibling species of South American electric fish (*Gymnorhamphicthys*:Gymnotiformes) by morphological, behavioral and mitochondrial DNA characters**
*J.P. Sullivan, J.G. Lundberg

4:00 545 **Alternative Resolutions of Incongruent Data Sets From Spiny-Tailed Iguanas (*Ctenosaura*: Iguanidae)**
*L. Buckley

4:15 546 **Character Congruence and Phylogenetic Signal in Molecular and Morphological Data Sets: a Case Study in the Living Iguanas (Squamata)**
*J.W. Sites, Jr, S.K. Davis, J.B. Iverson, H.L. Snell

4:30 547 **Morphological and Genetic Variation Among Populations of Two Sympatric Species of *Desmodium* (Fabaceae)**
*J.A. Raveill

4:45 548 **Molecules, Morphology and the Phylogeny of an Avian Family, the Falconidae: Total Evidence?**
*C.S. Griffiths

5:00 549 ***Engrailed* Gene Expression in the Mollusca and a Total Evidence Approach to Phylogeny of the Molluscan Classes**
*C.G. Wray, D.K. Jacobs, D.R. Lindberg

5:15 550 **Tongue Morphology and Phylogeny of Phyllostomid Bats: Widening the Total Evidence Net**
*M. Rockman, A.L. Peffley, N.B. Simmons

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Rebstock 215

3:30-5:30 **Session 62 Molecular Systematics: Insects**
Chair: Jan E. Conn

3:30 551 **A Phylogenetic Analysis of Social Evolution in North American *Malacosoma* (Lepidoptera: Lasiocampidae)**
*J.T. Costa

3:45 552 **The Origin of Monophagy in the Bark Beetle Genus *Dendroctonus* (Coleoptera: Scolytidae)**
*S.T. Kelley, B.D. Farrell

4:00 553 **Evolution of Host-Plant Shifts in the Leaf Beetle Genus *Gonioctena* (Coleoptera; Chrysomelidae): Evidence Derived From Allozymes and Mitochondrial DNA Sequences**
*P. Mardulyn, M.C. Milinkovitch, J.M. Pasteels.

4:15 554 **Sequence Divergence in the Mitochondrial Cytochrome Oxidase I Gene of the Fall Armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae)**
P.A.Y. Maas, *O. Sanjur

4:30 555 **Molecular Population Genetics of a Neotropical Mosquito Species Complex**
*J.E. Conn

4:45 556 **Comparing Different Gene Regions to Infer Phylogenetic Relationships Within the *Drosophila melanogaster* Species Group**
*V. Schawaroch, R. DeSalle, G. Simmons

5:00 557 **Molecular Systematics of the Caribbean *Drosophila mayaguana* Subcluster: Gene Genealogies vs. Species Phylogenies**
*C.M. Durando, R. DeSalle, M. Wasserman, W. Etges

5:15 558 **Phylogenetic Relationships Among Brazilian *Drosophila* of the Cluster *buzzatii* (*repleta* Group), Inferred from mtDNA Sequences**
*M.H. Manfrin, R.A. de Brito, F.M. Sene

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Wilson 112

3:30-5:30 **Session 63 Speciation and Cladogenesis**
Chair: Lisa M. Meffert

3:30 559 **Adaptation and Speciation in *Neochlamisus* Leaf Beetles**
*D.J. Funk

3:45 560 **Adaptive Radiation and Phylogeny of a Lineage of Hawaiian Spiders**
*R.G. Gillespie

4:00 561 **Results From a Selection Experiment to Cause Speciation Through Divergent Courtship Repertoire**
*L.M. Meffert

4:15 562 **Results of Selection for Premating Isolation in Bottlenecked and Non-Bottlenecked Populations of the Housefly**
*J. Regan, L.M. Meffert, E.H. Bryant

4:30 563 **Reproductive Barriers in *Phacelia Dubia*: A Chromosomal Model**
*F. Levy

4:45 564 **Genetic Dissection of Sexual Isolation in *Drosophila melanogaster*.**
*C.-T. Ting, C.-I Wu.

5:00 565 **Effects of Hybridization on Co-Speciation: Planthoppers (Hemiptera) and the Hawaiian Silversword Alliance**
*G. Roderick, E. Metz, R. Robichaux

5:15 566 **Host-Plant Associated Fitness Trade-offs in the Apple Maggot Fly, *Rhagoletis pomonella*: The Effects of the Duration of Winter**
J.L. Feder, *J.B. Roethele, U. Stolz, K. Lewis, W.L. Perry

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January 110

3:30-5:30 **Session 64 Experimental Evolution**
Chair: Wayne D. Crill

3:30 567 **Timing of Transmission and the Evolution of Virulence: an Experimental Test Using the Nuclear Polyhedrosis Virus of the Gypsy Moth, *Lymantria dispar***
*V.S. Cooper, J.A.Miller, M.H. Reiskind, K.Shelton, E.J. Temeles, B.A. Walther, M. Smitherman, G. Dwyer, J.S. Elkinton, J.P. Burand, P.W. Ewald

3:45 568 **Tradeoff in Horizontal and Vertical Modes of Transmission in Bacterial Plasmids**
*P.E. Turner, R.E. Lenski.

4:00 569 **Experimental Molecular Evolution in Bacteriophage: Evolution of a Divergent Trans-Gene in a Novel Genome Environment**
*W.D. Crill, I.J. Molineux, J.J. Bull

4:15 570 **Evolution of Antibiotic Resistance in *E. coli*: What Are the Fitness Costs of Resistance?**
*V. Perrot, *S.J. Schrag

4:30 571 **Evolution of Antibiotic Resistance in *E. coli*: Modification of the Cost of Resistance by Natural Selection**
*S.J. Schrag, *V. Perrot

4:45 572 **The Evolution of Antibiotic Resistance in Bacteria**
*M. Lipsitch, B.R. Levin

5:00 573 **Evolution of Resistance in *Brassica rapa*: Examining Levels of Tolerance in Lines Divergently Selected for Glucosinolate Content**
*K.A. Stowe

5:15 574 **The Potential for and Constraints on Resistance Evolution in *Ascepias syriaca***
*C.G. Hochwender

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Brown 118

3:30-5:30 **Session 65 Ecological Genetics**
Chair: John Nason

3:30 575 **Population Biology of S-Allele Diversity in the Solanaceae**
*A.D. Richman, M.K. Uyenoyama, J.R. Kohn

3:45 576 **Contrasting Genealogies of S-Alleles in Two Species of Solanaceae**
*J.R. Kohn, M.K. Uyenoyama, A.D. Richman

4:00 577 **A Five Year Study of Introgression Between Wild and Cultivated Sunflowers**
*J. Whitton, L.H. Rieseberg

4:15 578 **Reproductive Biology and Genetic Structure of Tropical Forest Fragments**
*J. Nason, J. Hamrick

4:30 579 **Evolution in Declining Populations: The Roles of Immigration and Density-Dependence**
*R. Gomulkiewicz, R.D. Holt

4:45 580 **Direct Assessment of a Genetic Bottleneck by Comparison of Modern and Historic Whooping Cranes**
*T.C. Glenn, M.J. Braun, W. Stephan

5:00 581 **Evolutionarily Significant Units of the Bald Eagle**
*C. Raven

5:15 582 **Global Patterns in Fish Intraspecific mtDNA Diversity**
*L. Bematchez

Rebstock 322

:30-5:30 **Session 66 Maternal Effects as Adaptation**
Chair: Susan Mazer

:30 583 **Maternal Environmental Effects on Seed Size in Wild Radish (*Raphanus sativus*): Adaptive Response Or Neutral Alternative?**
*S. Mazer, L. Wolfe

3:45 584 **Seed Dispersal and Maternal Effects: Variation Between Generations in Maternal Home Site Quality**
*K. Donohue

4:00 585 **Realized Response to Selection of Maternally Inherited Traits in the Winter Annual Plant, *Collinsia verna* (Scrophulariaceae)**
*D.A. Thiede

4:15 586 **Conspecific Nurse Effects and the Evolution of Monocarpy in Plants**
*A. Wied, C. Galen

4:30 587 **Adaptive Plasticity and Maternal Effects in Lizards**
*B. Sinervo

4:45 588 **Maternal Effects and the Maintenance of Temperature-Dependent Sex Determination in Reptiles**
*W.M. Roosenburg, P. Niewiarowski

5:00 589 **The Role of Environmental Variation in Parental Effects Expression**
*M.C. Rossiter

5:15 **Round-Table Discussion: Maternal Effects as Adaptations**

Saturday, 22nd March: Evening

Athletic Complex

7:00 **SSE/SSB Banquet**

Athletic Complex

8:00 **Plenary 4 SSE Presidential Address**
Genetic Architecture: Getting to the Heart of the Matter
*Alan Templeton

Sunday, 23 June: Morning I

Rebstock 322

8:30-10:00 **Session 67 Life Histories and Development**
Chair: Jeff Arendt

8:30 590 **cancelled**

8:45 591 **Relationship of Queen Number and Queen Relatedness in Multiple-Queen Fire Ant Colonies**
*M.A.D. Goodisman, K.G. Ross

9:00 592 **The Effects of Predation on Prey Life History and Development in Organisms With Facultative Life Cycles: A Model**
*K.R. Hopper, P.H. Crowley

9:15 593 **Metabolic Constraints on the Transmission Strategy of a Horse Parasite (*Strongylus* spp., Nematoda)**
*D.L. Medica, M.V.K. Sukhdeo

9:30 594 **Costs of Rapid Growth in Pumpkinseed Sunfish**
*J. Arendt, O. Latvitsky, D.S. Wilson

9:45 595 **Selection for Stress Tolerance in Field Mustard (*Brassica rapa*): Is There a 'Stress-Tolerant' Life History Strategy?**
*M.L. Stanton, B.A. Roy

10:00-10:30 Break

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Rebstock 215

8:30-10:00 **Session 68 Evolutionary Theory**
Chair: Laurence Mueller

8:30 596 **Evolution on Holey Landscapes**
*S. Gavrilets

8:45 597 **An Individual Based Model (IBM) Simulation of Peak Shifts With Founder Effect, and Stage One of Wright's Shifting Balance Theory**
*T. Gregg, J. Bloom

9:00 598 **Evolutionary Theory Predicts Late-Life Mortality Plateaus**
*L.D. Mueller, M.R. Rose

9:15 599 **Taking Phenotype Seriously: Modeling the Evolution of Development With Epistasis**
*S. Rice

9:30 600 **Punctuated Equilibria of Quantitative Characters Caused by Periodic Selection in Experimental Populations of Escherichia coli**
*S.F. Elena, V.S. Cooper, R.E. Lenski

9:45 601 **Optimal Foraging and the Coexistence of Specialists and Generalists**
*B.W. Robinson, D.S. Wilson

10:00-10:30 Break

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McDonnell 361

8:30-10:00 Session 69 Geographic Variation and Hybrid Zones
Chair: Sheila Ward

8:30 602 **Population Density and Community Compositions Across the Big Sagebrush Hybrid Zone in Utah**
*H. Wang, D.C. Freeman, E.D. McArthur, S.C. Sanderson

8:45 603 **Genetic Relationships Among Spring and Fall Flowering Populations of a Caribbean Epiphytic Orchid**
J.D. Ackerman, *S. Ward

9:00 604 **Estimating Fertility and Measuring Selection on Floral Characters in an *Ipomopsis* (Polemoniaceae) Hybrid Population**
*L.A. Prather, D.R. Campbell

9:15 605 **Distinguishing Hard From Soft Selection in a Natural Population of *Impatiens capensis***
*J.K. Kelly

9:30 606 **Genetic Differentiation and Evolution of Island and Mainland Populations of Slender Salamanders (*Batrachoseps*) in Southern California**
*E.L. Jockusch, D.B. Wake

9:45 607 **Patterns of Genetic Variation in the Federally Endangered Stephens' Kangaroo Rat (*Dipodomys stephensi*)**
*A.E. Metcalf, L.P. Nunney, B.C. Hyman

10:00-10:30 Break

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McDonnell 162

8:30-10:00 Session 70 Molecular Evolution
Chair: Christiane Biermann

8:30 608 **Analysis of the Evolutionary Constraints on Developmental Genes**
*E. Abouheif , R. Zardoya, A. Meyer

8:45 609 **Molecular Evolution of a Sea Urchin Gamete Recognition Protein**
*C.H. Biermann

9:00 610 **Homeotic Genes, Brain Development and Evolution of Tetrapods**
*T. Patarnello, L. Bargelloni, E. Boncinelli, F. Spada, M. Pannese, V. Borccoli

9:15 611 **Origins of the Arthropod Mandible**
*A. Popadic, D. Rusch, M. Peterson, B. Rogers, T.C. Kaufman

9:30 612 **Evolution of the Chordate Body Plan: Lessons From Molecular Analysis of the Urochordates**
*B.J. Swalla

9:45 613 cancelled

10:00-10:30 Break

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McDonnell 362

8:30-10:00 Session 71 Ecological Genetics
Chair: Dolph Schluter

8:30 614 **Adaptive Radiation Along Genetic 'Lines of Least Resistance'**
*D. Schluter

8:45 615 **Genetic Analysis of Life History Trait Variation in Two Populations of the Sailfin Mollie, *Poecilia latipinna* (Pisces: Poeciliidae)**
*J. Travis, N. Martin, C. Johnson

9:00 616 **What Is a Population? Demographic Analysis of Fish "Populations" in a Dynamic Environment**
*J. Trexler, W. Loftus

9:15 617 **Evolutionary Impacts of Contaminant Exposure on Mitochondrial and Nuclear DNA of Brown Bullhead (*Ameiurus nebulosus*) Populations**
*J. Chen, P. Hebert

9:30 618 **Selection for Leaky Self-Incompatibility**
*P. McElhany, M. Hatch

9:45 619 **Sexual Size Dimorphism and Lifetime Selection on Adult Body Size in a Natural Population of the Waterstrider *Aquarius remigis***
*R.F. Preziosi, D.J. Fairbairn

10:00-10:30 Break

Sunday, 23 June: Morning II

Rebstock 322
10:30-12:00 **Session 72 Life Histories and Development**
Chair: Neil Blackstone

10:30 620 **A Dose-Response Relationship for Experimental Heterochrony in a Colonial Hydroid**
*N. Blackstone

10:45 621 **Clonal Variation in Growth and Storage Lipids in the Sea Anemone *Haliplanella lineata***
*M. McManus, W.E. Zamer, A.R. Place

11:00 622 **The Influence of Population Density and Genotype on the Expression of Life History Traits in the Least Killifish, *Heterandria formosa***
*J. Leips, J. Travis

11:15 623 **Sperm dispersal and larval recruitment distances in a sessile marine invertebrate**
*D.R. Brumbaugh

11:30 624 **The Evolutionary Costs of Metal Tolerance in *Chironomus riparius* Measured in Terms of Reproduction and Survivability**
*J. Jobe

11:45 625 **cancelled**

Rebstock 215
10:30-12:00 **Session 73 Molecular Systematics**
Chair: Robert A. Feldman

10:30 626 **Phylogenetic Diversity of Bacterial Symbionts From Hydrothermal Vent and Seep Tube Worms**
*R.A. Feldman, M.B. Black, R. Lutz, R. Vrijenhoek

10:45 627 **Molecular Phylogeny Reveals Vicariance Biogeography and Escape From Concerted Evolution in the Phytopathogenic Fungus *Fusarium***
*K. O'Donnell, E. Cigelnik, H. Nirenberg

11:00 628 **Are the Endosymbiotic Ciliates of Ruminants the Sister Group to the Free-Living Haptorian Ciliates Or Did They Arise From Within the Haptorian Lineage?**
*A.-D.G. Wright, D.H. Lynn

11:15 629 **Species Radiations in the Insect Order Orthoptera**
*P. Flook, C.H.F. Rowell

11:30 630 **Phylogeny and biogeography of Central American arboreal alligator lizards (genus *Abronia*)**
*L. K. Ammerman, J. Willard, P.C. Chippindale, J.A. Campbell

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McDonnell 361
10:30-12:00 **Session 74 Macroevolution**
Chair: Jonathon Losos

10:30 631 **Species in the Genus *Chymomyza* Challenge Paterson's Mate Recognition Concept and a Macromutational Basis for Macroevolution**
*H.T. Band

10:45 632 **Phylogenetic Analysis of Fruit Dispersal Syndrome and Seed Number in the Asteridae**
*B.A. Whitlock, D.M. Ferguson, M.J. Donoghue

11:00 633 **Diversity As a Transient Phase of Macroevolution**
*G.J. Eble

11:15 634 **Speciation-Area Relationships in Caribbean *Anolis* Lizards**
*J.B. Losos, D. Schluter

11:30 635 **Molecular Evidence Against the Hypothesis of a Cambrian Explosive Divergence of Animal Phyla**
*J.S. Levinton, G A. Wray, L.H. Shapiro

11:45 636 **Evolutionary Constraints and the Vertebral Column in Rodents**
*S. Steppan

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McDonnell 162

10:30-12:00 **Session 75 Population Ecology**
Chair: Carol Kelly

10:30 637 **Convergent Evolution of a Molluscan Body Plan: Polyphyly of the Bivalvia**
W.R. Hoeh, *M.B. Black, R.G. Gustafson, A.E. Bogan, R.A. Lutz, R.C. Vrijenhoek

10:45 638 **Patterns of Pollen Removal and the Evolution of Selfing Rates**
*K.E. Holsinger

11:00 639 **Inbreeding Depression Extends to the Next Generation of Microgametophytes in *Cucurbita texana***
*M.H. Johannsson, A.G. Stephenson

11:15 640 **Selection by Seed Predators for Group and Individual Traits in *Liatris cylindracea* (Asteraceae)**
*C. Kelly

11:30 641 **The Apparent Biological Redundancy in the Ecology of Colicinogenic *Escherichia coli* Can Be Explained by Partial Colicin Resistance**
*M. Feldgarden, M.A. Riley

11:45 642 **A Graph Theory Approach to Demographic Loop Analysis: Partitioning Elasticity Matrices into Life History Pathways**
*G. M. Wardle

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McDonnell 362

10:30-12:00 **Session 76 Population Genetics**
Chair: Steven Broyles

10:30 643 **Genetic Diversity, Population Structure and Gene Flow in a Southern Neartic Migrant Landbird**
*K. Winker, G.R. Graves, M.J. Braun

10:45 644 **Interisland Genetic Structure of a Caribbean Iguana, *Cyclura carinata***
*M.E. Welch, G.P. Gerber

11:00 645 **The Additive and Dominant Effects of Genes for Mating System Differences Between *Mimulus guttatus* and *Mimulus micranthus***
*J.-Z. Lin, K. Ritland

11:15 646 **Mendelian Inheritance of Male Mating Strategies in a Marine Isopod**
*S.M. Shuster, C. Sassaman

11:30 647 **Reproductive Biology and Mating System Dynamics of Hybrid Milkweeds (*Asclepias exaltata* x *A. syriaca*)**
*S. Broyles, D. Laffin, S. Bauer, C. Vail

11:45 648 **Population Genetics and Mating System Estimates in Northern Populations of *Trillium erectum* and *T. grandiflorum***
*S. Broyles, S.L. Sherman-Broyles, P. Rogati

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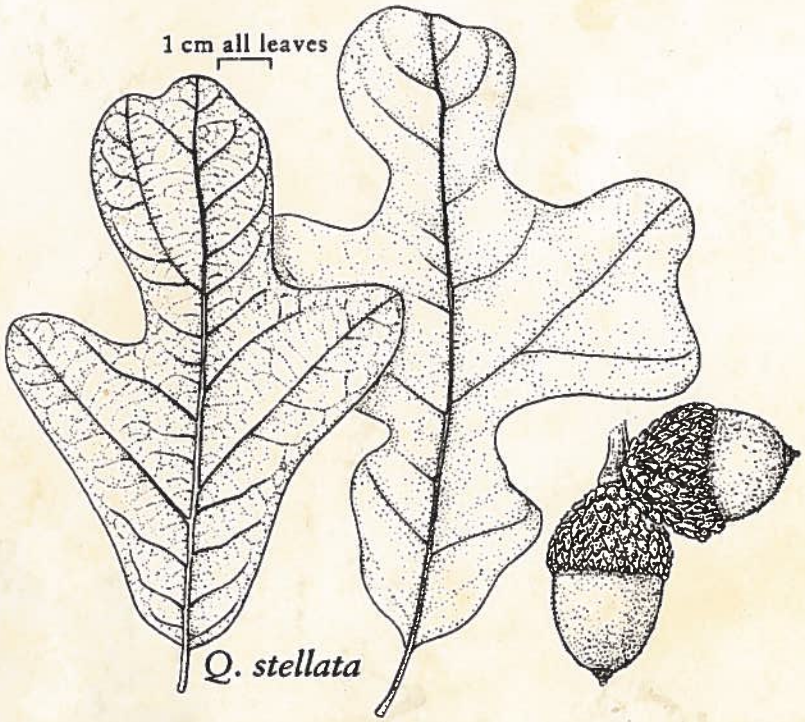

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