FINAL PROGRAM

Annual Meeting
The Society for the Study of Evolution
The American Society of Naturalists
The Society of Systematic Biologists

The University of British Columbia
Vancouver, Canada

June 20-24, 1998

Dolph Schluter, Conference Chair

Daphne J. Fairbairn and Jeff Reeve
Scientific Program Organizers
Georges Cuvier, Fossil Bones, and Geological Catastrophes
New Translations and Interpretations of the Primary Texts
Martin J. S. Rudwick
Cloth $24.95 302 pages
20 halftones, 4 line drawings
The Ovary of Eve
Egg and Sperm and Preformation
Clara Pinto-Correia
Cloth $29.95 396 pages
34 halftones, 21 line drawings
Life's Splendid Drama
Evolutionary Biology and the Reconstruction of Life's Ancestry, 1860–1940
Peter J. Bowler
Paper $22.00 526 pages
35 halftones, 20 line drawings
Science and Its Conceptual Foundations series
The Shape of Life
Genes, Development, and the Evolution of Animal Form
Rudolf A. Raff
Paper $29.95 520 pages
2 halftones, 59 line drawings
Evolutionary Paleobiology
Edited by David Jablonski, Douglas H. Erwin, and Jere T. Lipps
Paper $24.95 484 pages
10 line drawings, 23 maps
Cognitive Ecology
The Evolutionary Ecology of Information Processing and Decision Making
Edited by Reuven Dukas
Paper $30.00 448 pages
97 line drawings, 2 tables
What Emotions Really Are
The Problem of Psychological Categories
Paul E. Griffiths
Cloth $27.50 286 pages
2 halftones, 7 line drawings, 3 tables
Science and Its Conceptual Foundations series
American Pronghorn
Social Adaptations and the Ghosts of Predators Past
John A. Byers
Paper $23.95 300 pages
41 halftones, 111 line drawings, 4 tables
Foraging for Survival
Yearling Baboons in Africa
Stuart A. Altmann
Cloth $70.00 536 pages
82 line drawings, 73 tables
Wildlife of the Tibetan Steppe
George B. Schaller
Cloth $55.00 374 pages
91 halftones, 26 maps, 12 line drawings, 59 tables
Vanishing Treasures of the Philippine Rain Forest
Lawrence R. Heaney and Jocinto C. Regalado, Jr.
224 pages, 125 plates, 10 color plates
Journal available at this meeting
American Entomologist
Quantitative Review of Biology
Visit our book exhibit for a 20% discount on these and related titles.

The University of Chicago Press 5801 South Ellis Ave., Chicago, IL 60637
www.press.uchicago.edu
Acknowledgments

The Annual Meeting greatly appreciates support from:

Taylor & Francis, Inc.

for their generous sponsorship of the Opening Reception.

Publisher Exhibits
Please visit our exhibitors in the IRC Lobby. We are grateful for their support of our Annual Meeting:

- Academic Press
- Biological Sciences Press
- Blackwell Science, Inc.
- Harvard University Press
- Johns Hopkins University Press
- National Science Foundation
- Oxford University Press
- Prentice Hall
- Sinauer Associates, Inc.
- Taylor & Francis, Inc.
- University of Chicago Press

Conference Management
KREBS Convention Management Services
657 Carolina Street
San Francisco, CA 94107-2725 USA
415/920-7000
415/920-7001 (Fax)
krebsconv@aol.com

GENERAL INFORMATION

Meals
Meals are "on your own." There is a variety of affordable dining right on campus, from cafe to deli to full restaurant fare. Complimentary light refreshments will be served at the Welcoming Reception on Saturday evening. The First Nations Salmon Barbecue Monday evening is complimentary with your registration badge. You must wear your name badge. For guests, admission is by pre-paid ticket.

See the inside back cover for off-campus restaurants.
City Buses
Catch buses at the Bus Loop next to Student Union Building (SUB). **Bus #4, 9 & 10** drive to the restaurant district. Exact change ($1.50) is required. Transfers are valid up to two (2) hours from boarding, including the return trip. See the inside back cover for off-campus restaurants.

Messages
A message board is located at the Conference Registration Desk.

Childcare
Limited daycare is provided in SUB Room #215. Please inquire at our Registration Desk for details.

Speaker Ready Room
Speakers may preview their slides in IRC Room G57/59.

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**Notice to Session Chairs, Speakers and Poster Presenters**

**Paper Session Chairs:** Please arrive early to your session. Review your audio-visual equipment. A technician or room monitor will assist you. At the start of your session, **announce the rules:** 1) Speakers have a **total of 15 minutes,** including questions.
2) The Chair will warn speakers at 12 minutes by a hand signal; and will further warn them by **standing up** at 14 minutes. The speaker will be politely but firmly cut off at 15 minutes. No questions will be taken if the 15 minutes have elapsed. Enforce these rules. Do not get ahead of schedule; if there is a cancellation, wait until the scheduled time to begin the next talk.

**Speakers:** Please check the schedule to find the time and place of your talk. There may have been minor changes. Please arrive at your session early, with your slides pre-loaded into the slide carousel. (Extra carousels will be available from the technician.) Identify yourself to the Session Chair before the session begins. Note especially that the time allotted to you includes the question period -- help the Session Chair keep to the program schedule!

**Poster Presenters:** Numbered poster boards are installed in the Student Union Building (SUB) Ballroom and Party Room. Each poster is allotted a **4' x 4'** space. Please tack up your poster in the proper space prior to **8 pm Sunday.** Posters may be removed beginning 7 am Wednesday. Poster authors are **required** to stand by their posters during the main poster viewing **Monday afternoon, 2:45-6 pm.** Attendance at other poster viewing times is encouraged (Sunday and Tuesday evenings from 8-10 pm.)
## Program-in-Brief

### Saturday, June 20

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-10:30 am</td>
<td>Coordinating Council Meeting</td>
<td>Gage/R Blair D</td>
</tr>
<tr>
<td>10:30-12:30 pm</td>
<td>SSE Council Meeting</td>
<td>Gage/R Blair A</td>
</tr>
<tr>
<td>10:30-12:30 pm</td>
<td>SSB Council Meeting</td>
<td>Gage/R. Blair B</td>
</tr>
<tr>
<td></td>
<td>&lt;Taylor &amp; Francis, host&gt;</td>
<td></td>
</tr>
<tr>
<td>10:30-12:30 pm</td>
<td>ASN Executive Committee Meeting</td>
<td>Gage/R. Blair C</td>
</tr>
<tr>
<td>1:30-5:30 pm</td>
<td>Joint Symposium co-sponsored by SSE, SSB and Society for Molecular Biology and Evolution</td>
<td>IRC#2</td>
</tr>
<tr>
<td>3:30-4 pm</td>
<td>Coffee Break</td>
<td>IRC</td>
</tr>
<tr>
<td>11 am-8 pm</td>
<td>Registration</td>
<td>Gage/M. Murrin 1-3</td>
</tr>
<tr>
<td>6:30-9:30 pm</td>
<td>Reception sponsored in part by Taylor &amp; Francis, Inc.</td>
<td>SUB/Party Rm + Courtyard</td>
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<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
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</tr>
<tr>
<td>7 am-5 pm</td>
<td>Registration</td>
<td>IRC Lobby</td>
</tr>
</tbody>
</table>
| 8:15-12 noon | 10 Scientific Sessions
See schedule       | Hennings 200, 201, 202
Hebb Theatre, IRC 1-6 |
| 10 - 10:30 am| Coffee Break                               | Hennings, IRC                       |
| 12 noon - 1 pm| SSB Editorial Board
<Taylor & Francis, host> | IRC #G41-42                          |
| 12 noon - 1 pm| NSF Funding Discussion                     | IRC #1                              |
| 12 noon-1:30 pm| Lunch Break
on your own                | campus restaurants                  |
| 12 noon - 6 pm| Publisher Exhibits                         | IRC Lobby                           |
| 12 noon-8 pm | Installation of posters
by scientists | SUB/Ballroom + Party Room |
| 12:30-1:30 pm| SSE Business Meeting                        | IRC #G53-55                         |
| 1:30-2:30 pm | ASN Presidential Address                   | Chan Centre                         |
| 2:45-6 pm    | 10 Scientific Sessions
See schedule       | Hennings 200, 201, 202
Hebb Theatre, IRC 1-6 |
| 4-4:30 pm    | Coffee Break                               | Hennings, IRC                       |
| 6-8:30 pm    | Dinner Break
on your own                | off-site & campus restaurants       |
| 8-10 pm      | Poster Viewing
(beverages will be served) | SUB/Ballroom + Party Room           |
Monday, June 22

8 am - 4 pm    Registration    IRC Lobby
8 am - 6 pm    Publisher Exhibits    IRC Lobby
8:15 am-12 noon  10 Sessions
                See schedule    Hennings 200, 201, 202
                Hebb Theatre, IRC 1-6
10 - 10:30 am  Coffee Break    Hennings, IRC
12 noon-1 pm    SSE Editorial Board
                Meeting    IRC #G53-55
12 noon-1 pm    NSF Funding Discussion    IRC #1
12 noon-1:30 pm Lunch Break
                on your own    campus restaurants
12:30-1:30 pm  ASN Business Meeting    IRC #G65-66
1:30-2:30 pm   SSB Presidential Address    Chan Centre
afternoon       Satellite Meetings
                check bulletin board in
                Registration Area for
                latest information    Hennings 200, 201, 202
                Hebb Theatre, IRC 4-6
2:45-5 pm      "Educational Issues in
                Evolutionary Biology"
                IRC #3
2:45-6 pm      Poster Viewing
                (beverages will be served)
                SUB/Ballroom + Party Room
2:45-6 pm      SSB Symposium #5
                (formerly Wed. a.m.)
                IRC#2
3-3:30 pm      Sigma Xi Discussion    IRC #1
3:30-4:30 pm   Canadian Society of
                Ecologists--Preliminary
                Meeting    IRC#5
4:15-4:30 pm  Coffee Break    IRC
6-9:30 pm      Salmon Barbecue
                Badge or ticket required
                for admission    Anthropology Museum
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 am-12 noon</td>
<td>Registration</td>
<td>IRC Lobby</td>
</tr>
<tr>
<td>8 am - 4:30 pm</td>
<td>Publisher Exhibits</td>
<td>IRC Lobby</td>
</tr>
<tr>
<td>8:15 am-12 noon</td>
<td>10 Scientific Sessions</td>
<td>Hennings 200, 201, 202</td>
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<tr>
<td></td>
<td>See schedule</td>
<td>Hebb Theatre, IRC 1-6</td>
</tr>
<tr>
<td>10 - 10:30 am</td>
<td>Coffee Break</td>
<td>Hennings, IRC</td>
</tr>
<tr>
<td>12-12:30 pm</td>
<td>SSB Business Meeting</td>
<td>IRC #G41-42</td>
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<tr>
<td>12 noon-1 pm</td>
<td>Lunch Break</td>
<td>campus restaurants</td>
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<td>on your own</td>
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<tr>
<td>12 noon-1 pm</td>
<td>NIH Funding Discussion</td>
<td>IRC #1</td>
</tr>
<tr>
<td>1-1:30 pm</td>
<td>ASN/SSE/SSB Awards</td>
<td>Chan Centre</td>
</tr>
<tr>
<td>1:30-2:30 pm</td>
<td>SSE Presidential Address</td>
<td>Chan Centre</td>
</tr>
<tr>
<td>2:45-6 pm</td>
<td>10 Scientific Sessions</td>
<td>Hennings 200, 201, 202</td>
</tr>
<tr>
<td></td>
<td>See schedule</td>
<td>Hebb Theatre, IRC 1-6</td>
</tr>
<tr>
<td>4-4:30 pm</td>
<td>Coffee Break</td>
<td>Hennings, IRC</td>
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<tr>
<td>4 pm-5 pm</td>
<td>Coordinating Council</td>
<td>IRC #G57-59</td>
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<tr>
<td>6-8:30 pm</td>
<td>Dinner Break</td>
<td>off-site &amp; campus restaurants</td>
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<tr>
<td>8-10 pm</td>
<td>Poster Viewing (beverages will be served)</td>
<td>SUB/Ballroom + Party Room</td>
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</tbody>
</table>
Wednesday, June 24

7 am-1 pm  Removal of posters  SUB/ Ballroom + Party Room

8:15 am-12:30 pm  8 Scientific Sessions  Hennings 200, 201, 202
                See schedule  Hebb Theatre, IRC 1-6

10 - 10:30 am  Coffee Break  Hennings, IRC

JOIN US AGAIN IN 1999!

Mark your calendar now!
Annual Meeting of SSE, ASN and SSB
24-27 June, 1999
Madison, Wisconsin USA
# SCHEDULE OF SESSIONS

## SATURDAY, JUNE 20

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
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</thead>
<tbody>
<tr>
<td>1:30-5:30</td>
<td>Symposium</td>
<td>IRC 2</td>
</tr>
<tr>
<td>1</td>
<td>Evolutionary Relationships among Eukaryotes</td>
<td>IRC 2</td>
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</tbody>
</table>

## SUNDAY, JUNE 21

### 8:30-12:00 Symposium

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The Geographic Mosaic of Coevolution in Natural Populations</td>
<td>IRC 2</td>
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</tbody>
</table>

### 8:15-10:00 Contributed Paper Sessions 1-9

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Biogeography/Geographic Variation - Snakes and Lizards</td>
<td>Henn 201</td>
</tr>
<tr>
<td>2</td>
<td>Phylogeny-based Comparative Methods</td>
<td>Henn 200</td>
</tr>
<tr>
<td>3</td>
<td>Combined-data Systematics</td>
<td>Henn 202</td>
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<tr>
<td>4</td>
<td>Measuring Selection in the Wild</td>
<td>IRC 5</td>
</tr>
<tr>
<td>5</td>
<td>Population/Ecological Genetics</td>
<td>IRC 6</td>
</tr>
<tr>
<td>6</td>
<td>Developmental Evolutionary Biology</td>
<td>IRC 3</td>
</tr>
<tr>
<td>7</td>
<td>Speciation and Cladogenesis</td>
<td>IRC 4</td>
</tr>
<tr>
<td>8</td>
<td>Sexual Selection</td>
<td>IRC 1</td>
</tr>
<tr>
<td>9</td>
<td>Molecular Systematics - Birds and Mammals</td>
<td>Hebb Th</td>
</tr>
</tbody>
</table>

### 10:30-12:00 Contributed Paper Sessions 10-18

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
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<tbody>
<tr>
<td>10</td>
<td>Population/Ecological Genetics - Fish</td>
<td>IRC 6</td>
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<tr>
<td>11</td>
<td>Phylogeny-based Comparative Methods</td>
<td>Henn 201</td>
</tr>
<tr>
<td>12</td>
<td>Combined-data Systematics - Vertebrates</td>
<td>Henn 202</td>
</tr>
<tr>
<td>13</td>
<td>Adaptation - Life History</td>
<td>IRC 4</td>
</tr>
<tr>
<td>14</td>
<td>Molecular Systematics - Methods</td>
<td>Hebb Th</td>
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<tr>
<td>15</td>
<td>Developmental Evolutionary Biology</td>
<td>IRC 3</td>
</tr>
<tr>
<td>16</td>
<td>Sperm Competition/Precedence</td>
<td>IRC 5</td>
</tr>
<tr>
<td>17</td>
<td>Adaptation - Molecular</td>
<td>IRC 1</td>
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<tr>
<td>18</td>
<td>Molecular Systematics - Insects</td>
<td>Henn 200</td>
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</tbody>
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### 1:30-2:30 Presidential Address

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
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</thead>
<tbody>
<tr>
<td>1:30-2:30</td>
<td>Presidential Address</td>
<td>Chan Centre</td>
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<tr>
<td>Robert K. Colwell, American Society of Naturalists</td>
<td>Chan Centre</td>
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</table>

### 2:45-6:00 Symposium

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>3</td>
<td>New Directions in Experimental Evolution</td>
<td>IRC 2</td>
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### 2:45-4:00 Contributed Paper Sessions 19-27

<table>
<thead>
<tr>
<th>Time</th>
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<th>Room</th>
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<tbody>
<tr>
<td>19</td>
<td>Evolutionary Theory</td>
<td>IRC 4</td>
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<tr>
<td>20</td>
<td>Biogeography/Geographic Variation - Insects</td>
<td>Henn 202</td>
</tr>
<tr>
<td>21</td>
<td>Coevolution Species/Interactions - Vertebrates</td>
<td>IRC 1</td>
</tr>
</tbody>
</table>
22  Quantitative Trait Loci  IRC 3
23  Molecular Evolution/Systematics - Methods  Hebb Th
24  Macroevolution  IRC 5
25  Biogeography/Geographic Variation - Amphibians  Henn 201
26  Conservation genetics - Molecular Markers  IRC 6
27  Molecular Evolution - Disease and Immune Response  Henn 200

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room</th>
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<tbody>
<tr>
<td>4:30-6:00</td>
<td>Contributed Paper Sessions 28-36</td>
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<tr>
<td>28</td>
<td>Evolutionary Theory</td>
<td>IRC 4</td>
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<tr>
<td>29</td>
<td>Phylogeography/Geographic Variation</td>
<td>Henn 202</td>
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<tr>
<td>30</td>
<td>Molecular Evolution/Systematics</td>
<td>Henn 200</td>
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<tr>
<td>31</td>
<td>Combined-data Systematics - Insects</td>
<td>Henn 201</td>
</tr>
<tr>
<td>32</td>
<td>Molecular Systematics - Plants</td>
<td>Hebb Th</td>
</tr>
<tr>
<td>33</td>
<td>Macroevolution</td>
<td>IRC 5</td>
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<tr>
<td>34</td>
<td>Evolution and Adaptive Significance of Sexual Dimorphisms</td>
<td>IRC 3</td>
</tr>
<tr>
<td>35</td>
<td>Conservation genetics - Plants</td>
<td>IRC 1</td>
</tr>
<tr>
<td>36</td>
<td>Molecular Evolution</td>
<td>IRC 6</td>
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</tbody>
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8:30 p.m. - 10:30 p.m.  Poster Viewing  Sub Ballroom

MONDAY, JUNE 22

8:30-12:00  Symposium  Room
4  The Future of Reconstructing the Past: Asymmetric Transformation Probabilities and Ancestral Character State Reconstruction.  IRC 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room</th>
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<tr>
<td>8:15-10:00</td>
<td>Contributed Paper Sessions 37-45</td>
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<tr>
<td>37</td>
<td>Adaptation - Behaviour</td>
<td>IRC 5</td>
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<tr>
<td>38</td>
<td>Biogeography/Geographic Variation - Plants</td>
<td>Henn 202</td>
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<tr>
<td>39</td>
<td>Selection Experiments - <em>Drosophila</em></td>
<td>Henn 200</td>
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<tr>
<td>40</td>
<td>Plant Pollination/ Reproduction</td>
<td>IRC 3</td>
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<tr>
<td>41</td>
<td>Adaptation</td>
<td>IRC 6</td>
</tr>
<tr>
<td>42</td>
<td>Coevolution - Host/Pathogen Interactions</td>
<td>Henn 201</td>
</tr>
<tr>
<td>43</td>
<td>Evolution and genetics of <em>Microorganisms</em></td>
<td>Hebb Th</td>
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<tr>
<td>44</td>
<td>Molecular Evolution/Population Genetics</td>
<td>IRC 4</td>
</tr>
<tr>
<td>45</td>
<td>Molecular Evolution</td>
<td>IRC 1</td>
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</tbody>
</table>

10:30-12:00  Contributed Paper Sessions 46-54  Room
46  Molecular Evolution/Population Genetics  IRC 6
47  Phylogeography/Geographic Variation  Henn 202
48  Combined-data Systematics  IRC 4

* Contributors must be at their posters Monday, 2:45-6:00.
1:30-2:30  Presidential Address  
Paula Mabee, Society of Systematic Biologists
  
2:45-6:00  Symposium  
5  Character Evaluation and Phylogenetic Analysis
IRC 2

2:45-5:00  Special Session  
Educational Issues in Evolutionary Biology
IRC 3

2:45-6:00  Poster Session*  
Sub Ballroom

TUESDAY, JUNE 23

8:30-12:00  Symposium  
6  Simulated Evolution and the Origin of Life
IRC 2

8:15-10:00  Contributed Paper Sessions 55-63  
55  Coevolution/Species Interactions - Parasites, Parasitoids
IRC 3
56  Hybrid Zones
IRC 4
57  Phylogeny-based Comparative Analyses
Henn 201
58  Speciation and Cladogenesis
Henn 202
59  Mating (Breeding) Systems - Animals
Henn 200
60  Inbreeding Depression
IRC 5
61  Phylogenetic Methodology
Hebb Th
62  Phenotypic Plasticity - Costs and Constraints
IRC 6
63  Conservation genetics - Mammals
IRC 1

10:30-12:00  Contributed Paper Sessions 64-72  
64  Biogeography/Geographic Variation – Fish
Henn 201
65  Biogeography/Geographic Variation - Mammals
Henn 202
66  Social Behaviour/Structure
IRC 6
67  Speciation and Cladogenesis - Insects
IRC 1
68  Molecular Evolution/Systematics
Hebb Th
69  Coevolution – Plant/Insect Interactions
IRC 3
70  Mating (Breeding) Systems - Plants
Henn 200

* Contributors must be at their posters Monday, 2:45-6:00.
71 Hybridization/Ecological Genetics IRC 4
72 Conservation genetics IRC 5

1:30-2:30 Presidential Address Room
Stevan J. Arnold, Society for the Study of Evolution Chan Centre

3:00-6:00 Symposium Room
7 Young Investigators IRC 2

2:45-4:00 Contributed Paper Sessions 73-81 Room
73 Speciation and Cladogenesis IRC 4
74 Biogeography/Geographic Variation - Insects Henn 201
75 Biogeography/Geographic Variation - Mammals Henn 202
76 Adaptation - Life History IRC 6
77 Conservation Genetics - Fish IRC 5
78 Phenotypic Plasticity - Plants IRC 3
79 Morphometrics IRC 1
80 Population/Ecological Genetics - Fish Hebb Th
81 Molecular Evolution Henn 200

4:30-6:00 Contributed Paper Sessions 82-90 Room
82 Phenotypic Plasticity - Animals IRC 3
83 Mating (Breeding) Systems – Plants IRC 4
84 Developmental Evolutionary Biology IRC 1
85 Hybridization/Ecological Genetics Henn 202
86 Population/Ecological Genetics Hebb Th
87 Quantitative Genetics IRC 5
88 Molecular Evolution/Population Genetics Henn 201
89 Molecular Evolution/Systematics Henn 200
90 Conservation genetics - Theory and Methodology IRC 6

8:30 p.m. -10:30 p.m. Poster Viewing* Sub Ballroom

Wednesday, June 24

8:15-10:00 Contributed Paper Sessions 91-99 Room
91 Quantitative Genetics IRC 6
92 Adaptation - Behaviour Henn 201
93 Evolution of Sex and Recombination IRC 3
94 Measuring Selection in the Wild IRC 1
95 Population/Ecological Genetics Henn 200
96 Coevolution – Plants, Pollinators and Pathogens IRC 5

* Contributors must be at their posters only on Monday, 2:45-6:00
97  Sexual Selection
98  Selection Experiments
99  Molecular Evolution

10:30-12:30  Contributed Paper Sessions 100-108

100  Evolution of Sex and Recombination
101  Species Interactions
102  Adaptation - Life History
103  Sexual Selection
104  Ecological Genetics
105  Viral Evolution
106  Quantitative Genetics of Life History Variation
107  Molecular Evolution - Microsatellites

Room
IRC 4
Henn 202
Hebb Th
IRC 1
IRC 5
Henn 201
Henn 202
IRC 6
Henn 200
IRC 4
Hebb Th

Special Sessions

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<td>Sunday, June 21</td>
<td>12:00-1:00</td>
<td>Tim Mousseau, NSF</td>
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<td>Monday, June 22</td>
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<td>Tim Mousseau, NSF</td>
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<td>Monday, June 22</td>
<td>3:00 - 3:30</td>
<td>Linda Delph, Sigma Xi</td>
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<td>Monday, June 22</td>
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<tr>
<td>Tuesday, June 23</td>
<td>12:00-1:00</td>
<td>Irene Eckstrand, NIH</td>
<td>IRC 1</td>
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SCIENTIFIC PROGRAM

SATURDAY, JUNE 20

Room IRC 2
Saturday, June 20

1:30 – 5:30 SYMPOSIUM 1: EVOLUTIONARY RELATIONSHIPS AMONG EUKARYOTES.
JOINT SSB, SSE, SMBE
Organizers: Laura Katz and Mitch Sogin

1:30 1 The Diversity and Diversification of Protists.
*David Patterson

2:00 2 The Search for our Ancestral Roots: Molecular Evolution in Eukaryotic Microorganisms.
*Mitch Sogin

2:30 3 Electron Microscopy as a Control for Molecular Phylogenetic Studies.
*Max Taylor

3:00 4 The Tangled Web: Interpreting Conflict among Eukaryotic Gene Genealogies.
*Laura Katz

3:30 – 4:00 Break

4:00 5 Reconstructing the Early Events in Eukaryotic Evolution.
*Andrew Roger

4:30 6 Tracing the Thread of Plastid Diversity through the Tapestry of Life.
*Charles Delwiche

5:00 7 Who's Who in the Crown of the Eukaryote Tree: Candidates for the Sister Group to Animals and Fungi.
*Sandra Baldauf.

SUNDAY, JUNE 21

Room IRC 2
Sunday, June 21

8:30 – 12:00 SYMPOSIUM 2: THE GEOGRAPHIC MOSAIC OF COEVOLUTION IN NATURAL POPULATIONS.
AMERICAN SOCIETY OF NATURALISTS
Organizer: John N. Thompson

8:30 8 Specific Hypotheses on the Geographic Mosaic of Coevolution.
*John N. Thompson

9:00 9 Spatial and Temporal Change in Coevolving Plant-Pathogen Metapopulations.
*Jeremy J. Burdon

9:30 10 Local Adaptation and Coevolution in Parasite/Host Interactions.
*Curtis M. Lively

10:00 – 10:30 Break

10:30 11 Rates of Coevolution between Plants and Microbial Pathogens versus Mutualists.
*Matthew A. Parker

11:00 12 Geographic Patterns in the Coevolutionary Interactions between Drosophila and their Parasitoids.
11:30  13  Geographic Structure and Replicate Coevolution between Crossbills and Lodgepole Pine.  
*Craig W. Benkman

8:15-10:00  SESSION 1: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - SNAKES AND LIZARDS  
Chair: Delbert Hutchison

8:15   14  Phylogeography of Caribbean Lizard Malaria Parasites.  
*S.L. Perkins, J.J. Schall

8:30   15  mtDNA Phylogeography of the Sagebrush Lizard, *Iscoelopus gracilis*, in California.  
*L.J. Frabotta

8:45   16  Phylogeographic Complexity and the Significance of Subspecies in the Western Fence Lizard, *Sceloporus occidentalis*.  
*J.W. Archie

9:00   17  Population Genetic Comparisons between Centrally- and Peripherally-Occupied Populations of the Eastern Collared Lizard (*Crotaphytus collaris collaris*).  
*D.W. Hutchison

9:15   18  Geographic and Interspecific Variation in the Lizard Genus Sauromalus in Relation to Environment.  
*P.S. Hamilton

*D.C. Nickle, D.I. Orange

9:45   20  Determinants of Morphological Patterns in Mexican Insular Rattlesnakes.  
*D.H. Theodoratus

8:15-10:00  SESSION 2: PHYLOGENY-BASED COMPARATIVE METHODS  
Chair: Mark Pagel

8:15   21  Comparing Comparative Methods Using a Known Virus Phylogeny.  
*T.H. Oakley

8:30   22  The Comparative Biology of Pollen Limitation.  
*B.M.H. Larson, S.C.H. Barrett

8:45   23  Phylogenetic Inertia as a Null Model in Comparative Studies.  
*D.B. Burt

9:00   24  Streaking and Boxing: A Method for Exploring Non-Linear Dynamics in Evolutionary Trends.  
*J. Alroy

9:15   25  Tree Dependent Inferences: Problems and Solutions.  
*G.A. Hoelzer, J. Lyons-Weiler

*B.R. Moore, K. Chan

9:45   27  Inferring Evolutionary Processes from Phylogenies.
8:15-10:00  **SESSION 3: COMBINED-DATA SYSTEMATICS**  
Chair: Mark Westneat

8:15  28  Reliability of Morphological Reductive Characters in Cardiid Bivalves as Tested with Molecular Phylogenetics.  
*J.A. Schneider, D. O Foighil*

8:30  29  Molecules Support Hexapoda + Crustacea Over Hexapoda + Myriapoda.  
*J.C. Regier, J.W. Shultz*

8:45  30  Phylogeny and Biogeography of Loliginid Squids Based on Parsimony and Likelihood Analyses of Multiple Data Sets.  
*F.E. Anderson*

9:00  31  Inference of Phylogenetic Pattern for the Eudicots (Angiosperms), and Distribution of Species Diversity.  
*S.A. Magallon, P.R. Crane*

*M.J. Zanis, D.E. Soltis, P.S. Soltis, Y.-L. Qiu*

9:30  33  Morphological and Molecular Support for Ecdysozoa.  
*J.R. Garey*

9:45  34  Phylogenetic Relationships and Evolution of Labrid Fishes.  
*M.W. Westneat*

8:15-10:00  **SESSION 4: MEASURING SELECTION IN THE WILD**  
Chair: Shyril O'Steen

8:15  35  Floral Symmetry and its Relation to Phenotypic Variance in Flower Size.  
*L.M. Wolfe*

8:30  36  Measurements of Selection on Floral Traits in Wild Radish: Use of Breeding Values to Control for Environmental Correlations.  
*J.K. Conner*

8:45  37  No Response Despite Selection and Genetic Variance: A Natural Consequence of Long-Term Directional Selection.  
*J.P. Reeve, D.J. Fairbairn*

9:00  38  Fitness Components Through Development in the Bark Beetle *Ips pini*.  
*A.M. Shumate*

*S. O'Steen, A.F. Bennett*

9:30  40  Molecular Genetic Variation and Individual Fitness in a Free-Living Vertebrate Population.  
*D.W. Colman, J. Pemberton*

9:45  41  The Timing of Natural Selection in a Marine Mussel Hybrid Zone.  
*E.W. Carson, T.J. Hilbish*
8:15-10:00 Session 5: Population/Ecological Genetics
Chair: Anne McMillen-Jackson

8:15 42 Cancelled

8:30 43 Centuries of Continuous Ecological-Genetic Data Recovered from a Micro-Crustacean Resting Egg Bank.
*J.K. Colbourne, H. Pollard, P. Limburg, P.D.N. Hebert

8:45 44 Genetic Variation in Ancient Cladoceran Eggs in Relation to Environmental Changes During the Past Millenium.
*P.P. Limburg, J.K. Colbourne, L.L. Weider

9:00 45 Comparison of Gene Flow Within Marine Littorinid Gastropod Species with Planktotrophic and Non-Planktotrophic Development.
*C.J. Kyle, E.G. Boulding

9:15 46 Pink Shrimp (Penaeus duararum) in the Southeastern United States: Does the Elongation Factor 1-Alpha Intron Reveal Population Genetic Structure?
*A.L. McMillen-Jackson, T.M. Bert

*A.J. Bohonak

9:45 48 Migration, Effective Size, and the Genetic Structure of Nematode Populations.
*M.S. Blouin

Room IRC 3
Sunday, June 21

8:15-10:00 Session 6: Developmental Evolutionary Biology
Chair: Gunter Wagner

8:15 49 Population Differences in Onset of Cranial Ossification as a Potential Cost of Rapid Growth in Sunfish.
*J.D. Arendt, D.S. Wilson

8:30 50 Cancelled

8:45 51 Heterochrony and Morphological Diversity in a Bahamian Pupfish Species Complex.
*C.L. Holtmeier

9:00 52 Evolution of Urodele Limb Development: Molecular Evidence.
*G.P. Wagner, P. Khan, M. DiLuna, E. Bullit

*M.H. Wake

9:30 54 Redundant Gene Functions and their Evolution.
*A. Wagner

*C. Chiu, G.P. Wagner

Room IRC 4
Sunday, June 21

8:15-10:00 Session 7: Speciation and Cladogenesis
Chair: Eric Taylor

8:15  56  A Role for Ecotones in Generating Diversity in Australian Tropical Rainforest.  
*C. Schneider, T.B. Smith, B. Larsson

8:30  57  Testing Reinforcement Theory in Desert Drosophila.  
*G.D. Hocutt

8:45  58  Sympatric Mammal-Eating and Fish-Eating Killer Whale (Orcinus Orca) Populations: Cultural Differences Limit Or Prevent Gene Flow.  
*L.G. Barrett-Lennard

9:00  59  Was Founder Effect a Causal Factor in Speciation of the Auklets: Evidence from Introns and MHC Polymorphism.  
*H.E. Walsh, I.L. Jones, V.L. Friesen

*K.B. O’Keefe, T.B. Smith

9:30  61  History of Genetic Divergence and Speciation in Sticklebacks Inferred from Microsatellites.  
*E.B. Taylor

9:45  62  Trade-Offs in Habitat Use Efficiency among Phenotypes from a Single Polymorphic Stickleback Population.  
*B.W. Robinson

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Room IRC 1  
Sunday, June 21

8:15-10:00  SESSION 8: SEXUAL SELECTION  
Chair: Rob Brooks

8:15  63  Invisible Ultraviolet Variation in a Structurally-Based Plumage Ornament: Implications for Intraspecific Signaling and Sexual Selection.  
*A.J. Keyser, G.E. Hill

8:30  64  Experimentally Imposed Monogamy Exposes an Intersexual Arms Race.  
*B. Holland, W.R. Rice

8:45  65  Within- and among-Population Variation in Courtship Displays of Male Limia perugia.  
*V.N. Rush, C.R. Sargent, H. Layson, E. Libby

9:00  66  Multiple Mate Choice Cues: The Object of One Or Many Preferences.  
*R.R. Brooks

9:15  67  Mate Choice Evolution and Gynogens: Are they Red Queens?  
*L.A. Dries

9:30  68  A Phylogenetic Perspective on Female Preference Evolution in the Guppy.  
*F. Breden, J.S. Taylor

9:45  69  Evolution of Sexually Selected Traits in Mollies (Poecilia: Mollienesia) from a Phylogenetic Perspective.  
*M.B. Ptacek, F. Breden

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Room Hebb Th  
Sunday, June 21

8:15-10:00  SESSION 9: MOLECULAR SYSTEMATICS – BIRDS AND MAMMALS  
Chair: Mark Springer

17
A Multigene Analysis of Marsupial Interordinal Relationships.  
*M.S. Springer, A. Burk, M. Westerman, C.W. Krajewski

Phylogeny of Ground Squirrels and Prairie Dogs Based on Cytochrome b Sequences.  
*R.G. Harrison, R.S. Hoffmann, P.W. Sherman, E. Yensen

Placental Interordinal Relationships: Evidence from the 12S and 16S rRNA Genes.  
*D.J. Kao, H.M. Amrine, M.S. Springer

The Role of Bats in the Maintenance of Rabies in the United States: Evidence for a Solitary,  
Reclusive Bat Species as the Reservoir for Most Fatal Human Infections.  
*S.L. Messenger, J.S. Smith, L.A. Orciari, C.E. Rupprecht

A Single, Ancient Origin of Brood Parasitism in African Finches: Implications for Host-Parasite  
Coevolution.  
*M.D. Sorenson, R.B. Payne

Phylogeny for the Avian Genus *Pitohui*; Evolution of Avian Chemical Defense.  
*J.P. Dumbacher

Phylogenetic Relationships of Muntjac (*Artiodactyla: Cervidae: Muntiacinae*) Based on  
Molecular Data.  
*M.G. Egan, G. Amato

Room IRC 6  
Sunday, June 21

10:30-12:00 SESSION 10: POPULATION/ECOLOGICAL GENETICS - FISH  
Chair: Tomas Hrbek

Killifishes of Lake Maracaibo Basin, Venezuela: Invisible Barriers to Geneflow?  
*Hrbek, A. Larson

Phylogeography of the Plains Killifish, *Fundulus zebrinus*: Implications for its Zoogeography and  
Taxonomy.  
*K.A. Callicott, D.A. Powers

Population Structure in the Killifish *Fundulus heteroclitus*.  
*K.A. Callicott, D.A. Powers

A Nuclear DNA Basis for Shelf- and Bank-Scale Structure in Atlantic Cod from Labrador to  
Georges Bank.  
*D.E. Ruzzante, C.T. Taggart, D. Cook

Rapid Evolution in Introduced Salmon Populations.  
*A.P. Hendry

Molecular Ecology of the Lake Nipigon Ciscoes (*Salmonidae*) Species Flock.  
*J. Turgeon, A. Estoup, L. Bernatchez

Room Henn 201  
Sunday, June 21

10:30-12:00 SESSION 11: PHYLOGENY-BASED COMPARATIVE ANALYSES  
Chair: Bernard Crespi

Comparative Analysis of the Evolution of Gall Morphology and the Logical Power of  
Phylogeny-Based Tests.  
*B. Crespi, M. Worobey

A Phylogenetic Test of Ecomorphological Adaptation in *Cancer* Crabs.
*M. Harrison, B. Crespi
11:00 85 The Fate of Evolutionary Novelties: The Floral Corona of Asclepiadaceae.
*M. Fishbein
*C.P. Sandoval, D. Carmean, B. Crespi
11:30 87 Non-Photosynthetic Broomrapes and their Relatives: Complex Pattern Seen in Rates of DNA Sequence Evolution.
*N.D. Young, C.W. dePamphilis
11:45 87B Reversal in Ovary Position in the Haemodoraceae: Evidence from Ontogeny.
*M. G. Simpson

Room Henn 202
Sunday, June 21

10:30-12:00 SESSION 12: COMBINED-DATA SYSTEMATICS - VERTEBRATES
Chair: Tod Reeder

10:30 88 Phylogenetic Relationships within the Australian Sphenomorphus Group (Squamata: Scincidae) and the Evolution of Limb Reduction.
*T.W. Reeder
10:45 89 Systematics of Suboscine Birds: A Nuclear and Mitochondrial Perspective.
*R.T. Chesser
11:00 90 Relationships of the Large Waterbird Orders: Contributions of DNA Sequence Data to Questions in Higher Order Avian Systematics.
*S.E. Stanley
11:15 91 The Phylogenetic Position of Cetacea: An Evaluation of Molecular and Morphological Data.
*M.A. O'Leary
11:30 92 Pholidota and Xenarthra, sister taxa within Eutheria? Some new molecular evidence.
*J.E. Norman, M.V. Ashley
11:45 93 Multigene Analysis of Kangaroo Intergeneric Relationships.
*A. Burk, M.S. Springer

Room IRC 4
Sunday, June 21

10:30-12:00 SESSION 13: ADAPTATION - LIFE HISTORY
Chair: George Gilchrist

10:30 94 Neutrality Testing of mtDNA Cytochrome b for Centropomine Fish Species Having Disparate Life Histories.
*M.D. Tringali, T.M. Bert, S. Seyoum
10:45 95 Life History Differences in Isolated Waterstrider (Aquarius najas) Populations.
*P. Ahlroth
11:00 96 Adaptation to Life in the Desert: Desiccation Resistance in Endemic Flies.
*C. Breitmeyer
11:15 97 The Influence of Frequency-Dependent Predation on the Timing of Life-History Transitions.
*R.R. McGregor
11:30 98 Rapid Evolution of Life History Traits in the Introduced Species, Drosophila subobscura.
11:45  99  Multivariate Differentiation of Life-History Traits in the Lyre-Leaved Rockcress, Arabis lyrata.  
*R.H. Podolsky

10:30-12:00  SESSION 14: MOLECULAR SYSTEMATICS - METHODS  
Chair: Ken Halanych

10:30  100  The External Transcribed Spacer of the rDNA Repeat: A New Means of Resolving Low-Level 
Relationships in the Asteraceae and Closely Allied Families.  
*C.R. Linder, L.R. Goertzen, J. Francisco-Ortega, R. Jansen

*F. Roedding

11:00  102  Empirical Comparison of Four Methods of Estimating Internal Support of Phylogenetic Trees 
Based on Three Data Sets for Seed Plants.  
*M.E. Mort, D.E. Soltis, P.S. Soltis

11:15  103  On the Best Evolutionary Rate for Phylogenetic Analysis.  
*Z. Yang

11:30  104  The Importance of Hypothesis Testing in Systematics; a Case Study with Lophophorates.  
*K.M. Halanych

11:45  105  Isolation of Genetic Markers Using Representational Difference Markers.  
*A. Nekrutienko, R.J. Baker

10:30-12:00  SESSION 15: DEVELOPMENTAL EVOLUTIONARY BIOLOGY  
Chair: Guoping Shu

10:30  106  Diversity and Evolution of Shoot Morphogenesis Patterns in Brassicaceae Species.  
*G. Shu, W. Amaral, D. Baum

10:45  107  Phylogeny and Floral Morphology of the Vochysiaceae, a Group of Tropical Plants with Really 
Weird Flowers.  
*A. Litt, D.W. Stevenson, M.W. Chase

11:00  108  Cancelled

*G. Bharathan, T. Goliber, N. Sinha

11:30  110  A New Comparative Method for Integrating Ontogenetic and Phylogenetic Data: An Application 
to the Evolution of the Crocodylian Secondary Palate.  
*H.C.E. Larsson

11:45  111  Postnatal Ontogeny of Feeding Morphology in Old World Fruit Bats: A Comparison of 
Frugivores and Nectarivores.  
*M.M. Cogan

10:30-12:00  SESSION 16: SPERM COMPETITION/PRECEDENCE  
Chair: Alberto Civetta
10:30 112  A Program to Estimate Levels of Multiple Paternity and Sperm Competition from Genetic Data on Mothers and Offspring.  
*K.L. Kichler, M.T. Holder

16:45 113  Mating Behavior in Milkweed Beetles: A Test of Two Sperm Competition Models.  
*S.L. Lance, L. Chao

11:00 114  Chromosomal Mapping of Male and Female Components of Sperm Precedence in Drosophila.  
*A. Civetta, A.G. Clark

11:15 115  Male x Female Interaction in Sperm Competition in Drosophila.  
*A.G. Clark, D.J. Begun, T. Prout

11:30 116  Mechanisms of Sperm Precedence within and between Species of Drosophila.  
*C. Price

*C. Gabor, J. Krenz, R. Jaeger

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Room IRC 1  
Sunday, June 21  

10:30-12:00  
SESSION 17: ADAPTATION - MOLECULAR  
Chair: Keith Crandall

10:30 118  The Genetic Code Has Been Shaped by Selection.  
*S.J. Freeland, L.D. Hurst

10:45 119  Evolution of Multiple Hsp70 Genes in the Genus Drosophila.  
*B.R. Bettencourt, M.E. Feder

11:00 120  Cancelled

*E.C. Metz, V.D. Vacquier

11:30 122  Convergent Evolution of Drug Resistance in HIV Infected Patients.  
*K.A. Crandall

11:45 123  Coevolution of Mammalian Chemokines and Receptors.  
*A.L. Hughes, M. Yeager

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Room Henn 200  
Sunday, June 21  

10:30-11:45  
SESSION 18: MOLECULAR SYSTEMATICS - INSECTS  
Chair: Jan Conn

10:30 124  Opsin, a Potentially Useful Nuclear Gene for Insect Phylogenetics, Resolves Relationships among Apine Bees.  
*P. Mardulyn, S.A. Cameron

10:45 125  Evolutionary History of Anopheles darlingi (Diptera: Culicidae) Inferred Using Parsimony and Neighbour-Joining.  
*J.E. Conn

11:00 126  Rates and Patterns of Cladogenesis in the Caelifera (Insecta, Orthoptera).  
*P.K. Flook

11:15 127  Molecular Phylogenetics of Bark Beetles (Scolytidae) and the Evolution of Feeding Modes and
Mating Systems.
*B.B. Normark, B.H. Jordal, B.D. Farrell

11:30 129 Phylogenesis of Host Plant Use and Specialization in Papaipea (Lepidoptera: Noctuidae).
*P.Z. Goldstein

Room: Chan Centre
Sunday, June 21
1:30 – 2:30 PRESIDENTIAL ADDRESS
AMERICAN SOCIETY OF NATURALISTS
A time and place for everything: Integrating diverse approaches to understanding species’ distributions
Robert K. Colwell

Room IRC 2
Sunday, June 21
2:45 – 6:00 SYMPOSIUM 3: NEW DIRECTIONS IN EXPERIMENTAL EVOLUTION.
SOCIETY FOR THE STUDY OF EVOLUTION
Organizers: Adam Chippindale and Michael R. Rose

2:45 130 The Experimental Wonderland (Introduction).
*M. Rose

3:10 131 Evolution of Mutation Rates in E. coli.
*Paul Sniegowski and Philip Gerrish

3:35 132 Laboratory Evolution, Hybridization and the Genetic Basis of Stress Responses.
*Miriam Hercus and Ary Hoffmann

4:00 – 4:30 Break

4:30 133 Experimental Evolution of Specialization and Plasticity.
*Graham Bell

4:55 134 Interlocus Contest Evolution (ICE) and the Evolution of Counter-Adapted Gene Complexes: Experimental Evidence.
*William Rice and Brett Holland

5:20 135 Experimental Studies of Adaptation in Natural Populations of Guppies.
*David Reznick and Helen Rodd

5:45 136 Genetical Trade-Offs between Growth, Size, and Survival in a Complex Life-Cycle.
*Adam Chippindale

Room IRC 4
Sunday, June 21
2:45-4:00 SESSION 19: EVOLUTIONARY THEORY
Chair: Michael Grant

2:45 137 Using a Nonrecursive Formula to Determine Cladogram Probabilities.
*J.R. Stone, J. Repka

3:00 138 Feedback: A Novel Mechanism of Background Extinction.
*M.C. Grant, D. Robertson

3:15 139 Adequacy of Evolutionary Models with Correlations and Rate Heterogeneity.
*M. Schoeniger
3:30  140  Phylogenetic Estimation of HIV Population Parameters.
* D.A. Vasco, D. Posada, Y.-X. Fu, K.A. Crandall

3:45  141  Testing Hypotheses of Simultaneous Branching of Evolutionary Lineages Using Molecular Sequence Data.
* T. Jackman, A. Larson, K. DeQueiroz, J. Losos

Room Henn 202
Sunday, June 21

2:45-4:00  SESSION 20: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - INSECTS
Chair: Paul Chippindale

2:45  142  The Neotropical Hister servus Clade: Phylogenetics and Biogeographical Implications.
* M.S. Caterino

3:00  143  Biogeography of the Genus Liosphex Townes (Rhopalosomatidae, Hymenoptera, Insecta): Examining a Disjunct Distribution.
* A.E. Guidotti

3:15  144  Molecular Systematics of Black Flies (Subgenus Insetiellum) Endemic to the Society Islands, French Polynesia.
* D.A. Joy

3:30  145  Molecular Phylogeography of Ischnurine Damselflies I: Invasion and Radiation of the Genus Ischnura in North America.
* J.V. Robinson, P.T. Chippindale

3:45  146  Molecular Phylogeography of Ischnurine Damselflies II: Evolutionary History of the Genus Ischnura on a Global Scale.
* P.T. Chippindale, J.V. Robinson

Room IRC 1
Sunday, June 21

2:45-3:45  SESSION 21: COEVOlUTION/SPECIES INTERACTIONS - VERTEBRATES
Chair: Edmund Brodie III

2:45  147  Cancelled

3:00  148  Coevolution of Predators and Dangerous Prey: Costs of Tetrodotoxin Resistance in Garter Snakes.
* E.D. Brodie III, E.D. Brodie, Jr.

3:15  149  Incipient Host-Race Formation in the Common Cuckoo (Cuculus canorus).
* K. Marchetti, H. Nakamura, H.L. Gibbs

3:30  150  Coevolution among Hantaviruses and their Murid Hosts.

Room IRC 3
Sunday, June 21

2:45-4:00  SESSION 22: QUANTITATIVE TRAIT LOCI
Chair: Robert Latta

2:45  152  Phylogenetic Analysis of Chemosensory Behavior of Rhabditid Nematodes: A Starting Point for Comparative QTL Analysis.
* M. Juliet, B. Armstrong, P.C. Phillips

3:00  153  Population Differentiation of Allelic Frequencies at Quantitative Trait Loci Affecting Locally
Adaptive Traits.
*R.G. Latta

3:15 154 Courtship Song Quantitative Trait Loci in *Drosophila melanogaster.*
*J.M. Gleason

3:30 155 Genotype x Environment Interaction for Quantitative Trait Loci Affecting Bristle Number in *Drosophila melanogaster.*
*M.C. Gurganus, J.D. Fry, S.V. Nuzhdin, T.F.C. Mackay

3:45 156 A QTL Mapping Paradigm for Evolutionists.
*K. Ritland

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Room Hebb Th
Sunday, June 21

2:45-3:30 SESSION 23: MOLECULAR EVOLUTION/SYSTEMATICS - METHODS
Chair: James Lyons-Weiler

2:45 159 Unequivocal Coding and Optimal Weighting of Ambiguously Aligned Nucleotide Sequences for Phylogenetic Analyses.
*F.M. Lutzoni, V. Reeb

3:00 160 Phylogenetic Analysis is Signal Processing.
*J. Lyons-Weiler

3:15 161 Invariable Sites Models.
*M.A. Steel, P. Lockhart

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Room IRC 5
Sunday, June 21

2:45-3:45 SESSION 24: MACROEVOLUTION
Chair: Arne Mooers

2:45 162 A Hypothesis About Hierarchies.
*D.W. McShea

3:00 163 Allometry, Morphological Integration and Evolution of Form.
*B. Chernoff, P.M. Magwene

3:15 165 Phylogenies and Macroevolution: Sexual Selection and Diversification in Cranes.
*A. Mooers, S. Vamosi, D. Schluter

3:30 166 Evolutionary Relationships of *Phalanger gymnotis* (Marsupialia:Phalangeridae): Using Molecular Data to Interpret the Fossil Record.
*A.T. Hamilton, M. Springer

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Room Henn 201
Sunday, June 21

2:45-4:00 SESSION 25: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - AMPHIBIANS
Chair: Blair Hedges

2:45 167 Molecular Phylogeny of Caecilian Amphibians and Gondwanan Biogeography.
*J.A. Sheps, B.L. Cohen, R.A. Nussbaum, M. Wilkinson

3:00 168 Morphological and Trophic Variability in Populations of *Plethodon cinereus* and *P. hoffmani* in South-Central Pennsylvania.
*D.C. Adams

3:15 169 Cancelled

24
3:30 170  An Ancient Caribbean Frog Fauna.  
*B. Hedges

3:45 171  Possible Origins of Genetic Structuring and Diversification in the Canyon Treefrog, *Hyla arenicolor*.  
*P.H. Barber

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Room IRC 6  
Sunday, June 21
2:45-4:00  SESSION 26: CONSERVATION GENETICS - MOLECULAR MARKERS  
Chair: Jack Sites

2:45 172  Rapid Radiation and Phylogeny of Canaries (Genus *Serinus*) and Goldfinches (Genus *Carduelis*) Established by Cytochrome b Gene Sequence Comparison.  
*A.A. Arnaiz-Villena, M. Alvarez, V. Ruiz-Del-Valle, C. Garcia-Torre, P. Varela, M.J. Recio, S. Ferre, J. Martinez-Laso

3:00 173  Genetic Variation and the Potential Hybrid Origin of the Rare Yellow Larkspur, *Delphinium luteum*.  
*J.A. Koontz, P.S. Soltis, S.J. Brunsfeld

3:15 174  Molecular Genetics of a Bottleneck in a Natural Song Sparrow Population.  
*L.F. Keller

3:30 175  Conservation Genetics of the Amazonian River Turtle (*Podocnemis expansa*): Inferences from Molecular Markers in an Ecological Vacuum.  
*J.W. Sites, N.N. FitzSimmons, N. Jorge da Silva, V.H. Cantarelli

3:45 176  Genetic Analyses of Western Pond Turtle (*Clemmys marmorata*) Using Microsatellite DNA.  
*C.M. Ingram

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Room Henn 200  
Sunday, June 21
2:45-4:00  SESSION 27: MOLECULAR EVOLUTION - DISEASE AND IMMUNE RESPONSE  
Chair: Michael Worobey

2:45 177  Organization, Structure and Evolutionary Implication of the Human and Murine T-Cell Receptor Gamma Locus.  
Q. Zhou, *M.J. Parlee, M. Zhan, B.F. Koop

*M.G. Worobey, E.C. Holmes

*J. da Silva, A.L. Hughes

3:30 180  Patterns of HIV Evolution and Disease Progression.  
R.B. Markham, W. Wang, *A.E. Weissstein, Z. Wang

3:45 181  Evidence for Replication Slippage at Short Tandem Repeats in Human Cytomegalovirus: Implications for Genome Evolution and Epidemiology.  
*C.L. Davis, D. Field, D.L. Metzgar, C. Wills

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Room IRC 4  
Sunday, June 21
4:30-6:00  SESSION 28: EVOLUTIONARY THEORY
Chair: Maria Servedio

4:30 182 Insights into the Evolution of Aposematic Coloration from Models of Predator Learning. 
*M.R. Servedio

4:45 183 Somatic Mutation in Clonal Organisms: Selection on Chimeric Individuals. 
*M.E. Orive

5:00 184 A Genetic Model for the Evolution of Genomic Imprinting. 
*H.G. Spencer, M.W. Feldman, A.G. Clark

5:15 185 The Mitochondrial Germline Bottleneck and the Evolutionary Maintenance of Mitochondrial Genomes. 
*C.T. Bergstrom J.K. Pritchard

5:30 186 Dynamics of Speciation on Holey Adaptive Landscapes. 
*S. Gavrilets

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Room Henn 202
Sunday, June 21

4:30-6:00 SESSION 29: PHYLOGEOGRAPHY/GEOGRAPHIC VARIATION
Chair: Harilaos Lessios

4:30 187 Interpopulation Variation in Physiological Traits and Implications for Habitat Invasions. 
*C.Eunmi Lee

4:45 188 Word-Wide Phylogeny of the Sea Urchin Diadema: New Species and Unexpected Phylogenetic Patterns. 
*H.A. Lessios, B.D. Kessing, J.S. Pearse

5:00 189 After the Invasion: Comparative Phylogeography of Trans-Arctic Migrants in the North Atlantic. 
*J.P. Wares, C.W. Cunningham

5:15 190 Phylogeographic Differences of Two Squids (Loligo pealei & L. pleii) as Shown by mtDNA. 
*S.W. Herke, D.W. Foltz

*K. Holder, R. Montgomery, V.L. Friesen

5:45 192 Was the Passenger Pigeon a Pigeon?: Molecular Systematics of an Extinct Species. 
*K.P. Johnson, D.H. Clayton

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Room Henn 200
Sunday, June 21

4:30-6:00 SESSION 30: MOLECULAR EVOLUTION/SYSTEMATICS
Chair: John Stiller

4:30 193 Dramatic mtDNA Gene Rearrangement in Arthropods Defines Systematically Perplexing Anomuran Crustaceans? 
*C.L. Morrison

4:45 194 Phylogeny of the Kingsnakes and Milksnakes (Colubridae: Lampropeltis) Based on Cytochrome-b DNA Sequences. 
*J.W. Fetzner, L.R. Miller

5:00 195 C-myc Gene Evolution and Arniote Phylogeny. 
*W.T. McJilton, T.W. Reeder

5:15 196 Mitochondrial DNAs of the Most Basal Metazoan Branches - Sequences and Rates in the Sponges, Ctenophores, and Cnidarians.
Room Henn 201
Sunday, June 21
4:30-6:00
SESSION 31: COMBINED-DATA SYSTEMATICS - INSECTS
Chair: Brian Wiegmann

*J.R. Cryan, B.M. Wiegmann

4:45 200 Parsimony Analysis of Large Data Sets Using Ancestral States as Terminal Taxa: An Empirical Study of Noctuid Moths.
*A. Mitchell, C. Mitter

5:00 201 Combined Analysis of Phylogenetic Relationships among Microgastrine Braconid Wasp Genera Using Data from the 16S, COI and 28S Genes and Morphology.
*J.B. Whitfield, P. Mardulyn

5:15 202 The Shape of Fly Evolution: Phylogenetic Inference from Multiple Datasets.
*B.M. Wiegmann, D.K. Yeates, S. Tsaur

5:30 203 Strepsiptera and Long-Branch Distraction.
*M.F. Whiting

5:45 204 A Systematic Revision of Eurybia (Lepidoptera: Riodinidae).
*R.H. Hanner

Room Hebb Th
Sunday, June 21
4:30-6:00
SESSION 32: MOLECULAR SYSTEMATICS – PLANTS
Chair: Elena Conti

4:30 205 Interspecific Hybrid Origins and Adaptive Radiation of the Hawaiian Silversword Alliance.
*M. Barrier, B.G. Baldwin, R.H. Robichaux, M.D. Purugganan

4:45 206 Evidence for an Allopolyploid Origin of Subfamily Maloideae S. L. (Rosaceae) from the Nuclear Granule-Bound Starch Synthase (GBSS) or Waxy Gene.
*R.C. Evans, L. Alice, C.S. Campbell, E.A. Kellogg

5:00 207 Life History Evolution in the Silver Saxifrages: A Phylogenetic Perspective.
*E. Conti, D. Soltis, R. Gornall

5:15 208 Trans-Species Polymorphism and Paraphyly at the RNA Polymerase II Locus in Rhododendron.
*A.L. Denton, B.D. Hall

5:30 209 Molecular Systematic Analysis of Ulva and Enteromorpha (Ulvales, Chlorophyta).
*I.H. Tan, H.J. Sluiman

5:45 210 Patterns of Genetic Variation in Morphologically Heterogeneous Apomictic Populations of North American Crepis (Asteraceae).
*J. Whitton
4:30-5:45
SESSION 33: MACROEVOLUTION
Chair: Damhnait McHugh

4:30 211 Biogeography and Molecular Systematics of Deep-Sea Hydrothermal Vent Shrimp (Caridea; Alvinocarididae).
*T.M. Shank, R.C. Vrijenhoek

4:45 212 The Trinity Diversity-Disparity-Phylogeny: Concepts and Data, with Examples from Echinoids.
*G.J. Eble

5:00 214 Deciphering Metazoan Phylogeny Using Elongation Factor-1 Alpha.
*D. McHugh, K. Halanych, B. Richter

5:15 215 Molecular and Morphological Phylogenetics of Cryptic Species Complexes in Marine Bryozoans.
*D.R. Brumbaugh.

5:30 216 Likelihood Estimates of Phylogenies for Fossil Taxa and the Evolutionary Implications.
*P.J. Wagner

Room IRC 3
Sunday, June 21

4:30-5:45
SESSION 34: EVOLUTION AND ADAPTIVE SIGNIFICANCE OF SEXUAL DIMORPHISMS
Chair: Josepha P. Kurzdziel

4:30 217 Cancelled

4:45 218 Laryngeal Evolution and Sexual Dimorphism in the Frog Genus Physalaemus.
*C. Infante, D. Cannatella

5:00 219 Male Dimorphism and Combat in the Marine Amphipod Jassa: Do Big Thumbs Have It Hands Down?
*J.P. Kurzdziel, J.S. Levinton

5:15 220 Hormonal Control of Male Horn Length Dimorphism in a Beetle.
*D.J. Emlen

5:30 221 The Molecular Systematics of Stalk-Eyed Flies (Diopsidae): A Phylogenetic Analysis of Sexual Dimorphism and Eye Stalk Evolution.
*R.H. Baker, G.S. Wilkinson

Room IRC 1
Sunday, June 21

4:30-6:00
SESSION 35: CONSERVATION GENETICS - PLANTS
Chair: Lyn Loveless

4:30 223 Are Islands Islands? Genetic Structure of Castetum viridiflavum.
*C.J. Murren, C.D. Schlichting

4:45 224 Effects of Timber Extraction on the Genetics of Mahogany (Swietenia macrophylla) in Bolivia.
*M.D. Loveless, R.E. Gullison

5:00 225 Interpreting Patterns of Genetic Diversity in the Endangered Dwarf Milkweed, Asclepias uncialis, and Related Taxa.
*J.P. Therrien, K.D. James, J.H. Locklear

5:15 226 Genetic Variation in the Rare Lomatium (Apiaceae) Species L. bradshawii and L. ochocense as Determined from AFLP Markers.
M.A. Gitzendanner, P.S. Soliis
5:30  227  Deleterious Mutation Accumulation in Collections of Selfing and Outcrossing Plants.
* D.J. Schoen

5:45  228  Patterns of Endangerment among Lineages in the Hawaiian Flora.
* A.K. Sakai, W.L. Wagner, L.A. Mehrhoff

Room IRC 6
Sunday, June 21
4:30-6:00  SESSION 36: MOLECULAR EVOLUTION
Chair: Laura Landweber

4:30  229  Detecting Non-Neutral Evolution of Proteins Using Sequences from Thermophilic and
Mesophilic Prokaryotes.
* J.H. McDonald

4:45  230  Rhyme Or Reason in RNA Evolution.
* L.F. Landweber

5:00  231  Evolution of DNA Repair Proteins and Processes: Analysis of Complete Genomes.
* J.A. Eisen, P.C. Hanawalt

5:15  232  Analyzing Molecular Sequences When the Rate of Evolution Evolves.
* J.L. Thorne, H. Kishino

5:30  233  Horizontal Gene Transfer: Pitfalls and Promises.
* J.P. Gogarten, L. Olendzenski, R.D. Murphey

5:45  234  Ancient DNA in Greenlandic Icecores.
* A.J. Hansen E. Willerslev, P. Arctander, B. Christensen

MONDAY, JUNE 22

Room IRC 2
8:30 – 12:00  SYMPOSIUM 4: THE FUTURE OF RECONSTRUCTING THE PAST: ASYMMETRIC TRANSFORMATION
PROBABILITIES AND ANCESTRAL CHARACTER STATE RECONSTRUCTION.
SOCIETY OF SYSTEMATIC BIOLOGISTS
Organizers: Cliff Cunningham, Kevin Omland

8:30  235  Examining the Reliability and Assumptions of Ancestral State Reconstructions: The Repeated
Loss of Dimorphism in Birds.
* Kevin Omland

9:00  236  Estimating Ecological Transformations using Maximum Likelihood
* Dolph Schluter and Arne Mooers

* Rick Ree and Michael Donoghue

10:00 – 10:30  Break

10:30  238  The Role of Subjectivity in Reconstructing Ancestral Character States: A Bayesian Approach to
Unknown Rates, States and Transformation Asymmetries.
* Ted Schultz and Gary Churchill

11:00  239  Testing Evolutionary Hypotheses with Ancestral Character State Reconstructions: The Future of
Reconstructing the Past.
*Cliff Cunningham and Todd Oakley

11:30  240  Panel discussion

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Room IRC 5
Monday, June 22

8:15-10:00  SESSION 37: ADAPTATION - BEHAVIOUR
Chair: Thomas Getty

*K.S. Bostwick

8:30  242  The Value of Ethology for Addressing Evolutionary Questions.
*A.E. Stuart, D.C. Currie

8:45  243  Why the Handicap Principle of Signaling Is Superfluous.
*T. Getty

9:00  244  Cannibalism as an Exaptation for Colonization in a Ladybird Beetle.

9:15  245  Effect of Brood Size on Parental Care Behavior in the Burying Beetle Necrophorus orbicollis (Coleoptera: Silphidae).
*C.M. Rauter, A.J. Moore

9:30  246  Behavioral Specialisation in Nest-Weaving Ants (Polyrhachis).
*S.K. Robson

*C.E. Allen

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Room Henn 202
Monday, June 22

8:15-10:00  SESSION 38: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - PLANTS
Chair: Maria Claus

8:15  248  Performance of a Gall-Forming Insect on Host Plant Genotypes within and among Terrestrial Islands in the Southwest.
*D.A. Downie

8:30  249  Bet-Hedging and Environmental Gradients: Delayed Seed Germination in Desert Annual Plants Revisited.
*M.J. Claus, D.L. Venable

8:45  250  Clinal Variation in Morphology and Physiology of the Annual Legume, Chamaecrista fasciculata: Greenhouse Drought Studies.
*J.R. Etterson, T.D. Lee

9:00  251  Genetic Relationships among Distinct Geographic Populations of a Large Red Alga Grateloupia doryphora.
*M.F. Marston, M. Villalard-Bohnsack

9:15  252  Cancelled

*D.K. Oline

9:45  254  New and Improved Phylogeny of the Asteriscus Alliance: Evidence from the External Transcribed Spacer of the nrDNA.

30
8:15-10:00  **SESSION 39: SELECTION EXPERIMENTS - DROSOPHILA**  
Chair: Stephen Stearns

8:15  255  Experimental Life History Evolution in *Drosophila*.  
*S.C. Stearns*

8:30  256  Immunological Trade-Offs in *Drosophila melanogaster*: Preliminary Results.  
*K.A. McKeen, L. Nunney*

8:45  257  Evolution of Tolerance to Nitrogenous Waste in *Drosophila melanogaster*.  
*D.J. Borash, L.D. Mueller*

9:00  258  Reverse Experimental Evolution in *Drosophila melanogaster*.  
*H.K. Brar, M.R. Rose*

9:15  259  Convergence in the Laboratory Evolution of *Drosophila melanogaster*.  
*H. Teotonio, M.R. Rose*

*M.D.E. Fellowes, A.R. Kraaijeveld, H.C.J. Godfray*

9:45  261  Stress Resistance in Four Species of *Drosophila* Selected for Postponed Aging.  
*D.J. Deckert Cruz, J.L. Graves, Jr., M.R. Rose*

8:15-10:00  **SESSION 40: PLANT POLLINATION/ REPRODUCTION**  
Chair: Jeffrey Karron

8:15  262  Size-Dependent Gender Modification in *Trillium* (Liliaceae).  
*S.I. Wright, S.C.H. Barrett*

8:30  263  Pollination Biology of Monomorphic and Dimorphic Populations of *Wurmbea dioica* (Colchicaceae).  
*A.L. Case, S.C.H. Barrett*

8:45  264  General Mechanisms of Pollen Discounting and their Implication for Mating-System Evolution.  
*L.D. Harder, W.G. Wilson*

9:00  265  Wind Pollination, Reproductive Assurance and Mating System Evolution in *Linanthus* (Polemoniaceae).  
*C. Goodwillie*

9:15  266  Factors Influencing Outcrossing Rates and Patterns of Paternity in Monkeyflower, *Mimulus ringens*.  
*J.D. Karron*

9:30  267  Morph-Specific Pollinator Limitation of Fruit Set in the Gynodioecious Plant, *Lobelia siphilitica*.  
*D.A. Dudle*

9:45  268  Does Wind Pollination Precede Or Follow the Evolution of Sexual Dimorphism?  
*S.G. Weller, A.K. Sakai, A.E. Rankin, A. Golonka, B. Kutcher, K.E. Ashby*

Room IRC 6  
Monday, June 22
8:15-10:00  SESSION 41: ADAPTATION
Chair: John Endler

8:15  269  The Genetics of Adaptation: *Drosophila sechellia*’s Adaptation to its Host.
*C.D. Jones

8:30  270  On the Convergent Evolution of Molluscivory in Teleosts: The Perspective from Muscle Physiology.
*J.R. Grubich

8:45  271  Ambient Light, Signalling, and Microhabitat Choice.
*J.A. Endler

9:00  272  Dynamic Geographic Structure and Gene Flow in a Wild Leafminer Metapopulation.
*S. Mopper

9:15  273  A Meta-Analysis of Local Adaptation of Phytophagous Insects to their Host Plants.
*P.A. Van Zandt, S. Mopper

9:30  274  Testing Hypotheses of Local Adaptation in *Arabis fecunda*, a Rare Plant.
*J.K. McKay, J. Lin, T. Mitchell-Olde

9:45  275  Lungs on Legs: Evolutionary History and Adaptive Significance of Secondary Respiratory Structures for Intertidal Crabs.
*J.H. Stillman

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Room Henn 201
Monday, June 22

8:15-10:00  SESSION 42: COEVOLUTION - HOST/PATHOGEN INTERACTIONS
Chair: Judith Myers

8:15  276  Testing the Disease Resistance and Reduced Virulence Hypotheses in Cyclic Populations of Tent Caterpillars.
*J.H. Myers

8:30  277  Susceptibility of *Pinus contorta* - *banksiana* Complex to *Endocronarium harknessii*: Host - Pathogen Interactions and Geographic Variation.
*R.-C. Yang, Z. Ye

8:45  278  The Effect of a Pathogenic Fungus on Seed Weight and Seedling Growth of an Understory Tree.
*M. Heuhens, H. Wilbur, M. Hood

9:00  279  Pathogen Succession on Seedlings of *Anacardium excelsum*: Implications for Density-Dependent Regulation of Tropical Tree Diversity.
*J.M. Davidson, S.A. Rehner, M. Santana, E. Lasso, E.A. Herre

9:15  280  Disease and Competitive Abilities of Host Genotypes.
*J. Brunet, C. Mundt

9:30  281  Virulence and the Mode of Transmission in a Plant Virus.
*S.E. Kelley

9:45  282  Spatial Patterns of Disease Resistance in a Population of *Phlox paniculata*: Host Relatedness Is Not the Answer.
*P. McElhany, L.A. Real

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Room Hebb Th
Monday, June 22

8:30-10:00  SESSION 43: EVOLUTION AND GENETICS OF MICROORGANISMS

32
Chair: Alistair Cullum

8:30  283 Relative Fitness of Generalist and Specialist Lines of *E. coli* in Thermally Variable Environments.  
*A.J. Cullum, A.F. Bennett, R.E. Lenski*

8:45  284 Patterns of Compensation for Deleterious Mutations in *E. coli*.  
*F. Moore, D. Rozen, R.E. Lenski.*

9:00  285 Evolution of *E. coli* Under Extreme Thermal Conditions.  
*D.C. Scholl-Meeker, M.E. White*

9:15  287 Genome Evolution Through Interaction between Selfish Restriction Modification Genes and their Host.  
*Y. Nakayama, N. Handa, I. Kobayashi*

9:30  288 Bacterial Homologous Recombination in Conflict and Collaboration with Selfish Genetic Elements.  
N. Handa, A. Ichige, K. Kusano, *I. Kobayashi*

9:45  289 Experimental Drift: Mutation Accumulation in Small Populations of *Saccharomyces cerevisiae*.  
*C. Zeyl, A. DeVissier*

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Room IRC 4  
Monday, June 22

8:15-10:00 SESSION 44: MOLECULAR EVOLUTION/POPULATION GENETICS  
Chair: Gilean McVean

8:15  290 Patterns of Evolutionary Rate Variations among Genes of the Anthocyanin Biosynthetic Pathway.  
*M.D. Rausher, R.E. Miller, P. Tiffin*

8:30  291 Evolution of 'Trans-Specific' Hypervariable Motifs in the Major Histocompatibility Complex.  
*S.K. McWeeney*

8:45  292 Understanding the Overdispersed Molecular Clock.  
*D.J. Cutler*

9:00  293 A Coalescent Approach to Detecting Recombination.  
*M.K. Kuhner, J.A. Yamato, J. Felsenstein*

9:15  294 Interference between Weakly Selected Sites.  
*G.T. McVean, B. Charlesworth*

9:30  295 Coalescent Theory for a Partially Selfing Population.  
*Y.-X. Fu*

9:45  296 Explaining Rate Variation in Proteins with Known Tertiary Structure.  
*B. Golding, A. Dean*

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Room IRC 1  
Monday, June 22

8:15-10:00 SESSION 45: MOLECULAR EVOLUTION  
Chair: Susan Cropp

8:15  297 Allelic Variation in the X-Linked Color Vision Gene of Squirrel Monkeys.  
*S. Cropp*

8:30  298 Evolutionary Mechanisms Regulating Stress-Mediated Ldh-B Gene Expression between Populations of the Teleost, *Fundulus heteroclitus*.  
*H.C. Glemet, P.M. Schulte, D.A. Powers*
8:45  299  Molecular Evolution and Tissue-Specific Expression of Anthocyanin Genes in *Ipomoea purpurea* (Common Morning Glory).
*B.C. McCaig, M.L. Durbin, M.T. Clegg

9:00  300  Evolutionary Patterns of Primate Male Reproduction Associated Genes.
*G.J. Wyckoff, C. Wu

9:15  301  Timing the Divergence of Cichlid Major Groups.
*J.T. Streelman, S.A. Karl

9:30  302  Meiotic Drive of Knobs Reshaped the Maize Genome.
*E.S. Buckler, T.L. Phelps, C.S.K. Buckler, J.F. Doebley, T.P. Holtsford

9:45  303  Molecular Evolution of the Structural Gene Family, Chalcone Synthase, in the Grasses.
*V.M. Oberholzer, M.T. Clegg

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Room IRC 6
Monday, June 22

10:30-12:00  SESSION 46: MOLECULAR EVOLUTION/POPULATION GENETICS
Chair: Giacomo Bernardi

10:30  304  Concerted Evolution of MHC Class II Genes Revealed by Sequencing of a Red-Winged Blackbird Cosmid Clone.
*S.V. Edwards, J. Gaster, D. Martindale, B. Koop

10:45  305  Rates of Molecular Evolution in Mammalian mtDNA.
*D.M. Weinreich

11:00  306  Estimating within-Host Migration of HIV-1.
*G.H. Learn, A.G. Rodrigo, J.I. Mullins

11:15  307  Human Demographic History Inferred from Nuclear Genetic Haplotype Data.
*S.A. Tishkoff, A.G. Clark

11:30  308  Oceanographic and Ecological Barriers to Gene Flow in Black Surperch Populations Along the California Coast.
*G. Bernardi

11:45  309  Evolution and Maintenance of XY Females in Sigmodontine Rodents.
*H.E. Hoekstra, S.V. Edwards

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Room Henn 202
Monday, June 22

10:30-11:45  SESSION 47: PHYLOGEOGRAPHY/GEOGRAPHIC VARIATION
Chair: Steven Carr

*P. Beerli

*S.M. Carr, D.S. Kivlichan, P. Pepin, D.C. Crutcher

11:00  313  Tracking Marine Invasions of Freshwater: Systematics and Biogeography of Needlefishes (Belonidae).
*N.R. Lovejoy

11:15  314  Molecular Systematics and Biogeography of the Crotalinae (Serpentes: Viperidae).
*C.L. Parkinson

34
10:30-12:00 **SESSION 48: COMBINED-DATA SYSTEMATICS**
Chair: Richard Strauss

10:30 316 Phylogeny of Neotropical Monkeys: The Interplay of Morphological, Molecular and Parasitological Data.
*J.-P. Hugot

10:45 317 The Statistical Significance of Bootstrap Support Frequencies for Nodes on Phylogenetic Trees.
*R.E. Strauss, W.S. Algharaibeh

11:00 318 The Problem of Determining a Rooting for Bilateria with 18S rRNA Sequences.
*D.J. Eernisse

11:15 319 Using Branch Flexibility to Detect Uncertainties in Phylogenies.
*M.T. Holder

11:30 320 New Tools from the Chloroplast Genome for Inferring the Phylogeny of the Basal Angiosperms.
*S.W. Graham, R.G. Olmstead

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10:30-12:00 **SESSION 49: MATING (BREEDING) SYSTEMS – INSECTS AND FUNGI**
Chair: Else Fjerdingstad

10:30 321 Phenotypes and Fitness of Males and Queens in the Multiply-Mating Ant *Lasius niger* - Individual and Colony Level Effects.
*E.J. Fjerdingstad, L. Keller

10:45 322 Sex Ratio Evolution in Wood Ants: The Impact of Kinship and Ecological Factors.
*W.D. Brown, L. Keller

11:00 323 The Evolution of Genetic Relatedness and Inbreeding Levels in Eusocial Thrips: A Phylogenetic Perspective.
*T.W. Chapman, B.J. Crespi

11:15 324 Geographic Variation in Epicuticular Hydrocarbons in *Drosophila mojavensis*.
M.A. Ahrens, *W.J. Etges

11:30 325 Female Adaptations for Control in Mating.
*A. Crittonga, L. Rowe

11:45 326 A Molecular Phylogenetic Analysis of Breeding Strategies in *Cochliobolus* (Ascomycota, Fungi).
*M.L. Berbee, S. Yun, O.C. Yoder, B.G. Turgeon

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10:30-12:00 **SESSION 50: SELF-INCOMPATIBILITY**
Chair: Joshua Kohn

10:30 327 Self-Incompatibility Alleles in *Lycium* (Solanaceae).
*J.R. Kohn, A.D. Richman

10:45 328 Self-Incompatibility in Distylous *Turnera spp.*
*A. Athanasious, J.S. Shore

11:00 329 Population Genetics of Self-Incompatibility in *Witheringia*.

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       *A.D. Richman  

11:30  331  Linkage Disequilibrium at Self-Incompatibility Loci: Recombination and Selection at *Brassica* SI Alleles.  
       *J.E. Steinbachs, K.E. Holsinger  

11:45  332  Selfing and the Self-Incompatibility System of the Fungus *Cryphonectria parasitica*.  
       *R.E. Marra, M.G. Milgroom  

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**Room Henn 201**
Monday, June 22

**10:30-12:00**  
**SESSION 51: COEVOLUTION/SPECIES INTERACTIONS - MULTIPLE SPECIES**
Chair: Peter Abrams

10:30  333  Adaptation of Larval Anurans to Different Community Types.  
       *J.M.L. Richardson  

10:45  334  Nematodes Stage the Encounter: Amphipod Prey and Migrating Sandpipers.  

11:00  335  Centrifugal Community Organization: A Modeling Analysis of Density-Dependent Habitat Selection between Interspecific Competitors.  
       *C.G. Guthrie, D.L. Moorhead  

11:15  336  Centrifugal Community Organization: Quantifying Fitness for Two Competing Species.  
       *D.L. Moorhead, C.G. Guthrie  

11:30  337  Consequences of the Dynamics of Prey Choice by Predators.  
       *P.A. Abrams  

       *J.D. Damuth  

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**Room Hebb Th**
Monday, June 22

**10:30-12:00**  
**SESSION 52: EVOLUTION AND GENETICS OF MICROORGANISMS**
Chair: Rosemary Redfield

10:30  339  An Experimental Examination of the Role of Ecological Opportunity in Adaptive Radiation.  
       *M. Travisano, P.B. Rainey  

10:45  340  Consequences of Evolutionary Specialization in Long-Term Evolving Populations of *Escherichia coli*.  
       *V.S. Cooper, R.E. Lenski  

11:00  341  Conservation Genetics of *Escherichia coli*.  
       *J. Blanchard, I. Williams, N. Afzali, M. Lynch  

11:15  342  Evolution of Ecological Polymorphism in a Long-Term Evolving Population of *E. coli*.  
       *D.E. Rozen, D. Schneider, M. Blot, R.E. Lenski  

11:30  343  Evolution by Accident: The Causes of Genetic Variation in Bacteria.  
       *R.J. Redfield  

11:45  344  Does Periodic Selection in Bacteria Make Physiology Recapitulate Phylogeny? A Phenotypic Characterization of the *Bacillus subtilis* Species Complex.  
       *M. Feldgarden, F.M. Cohan  

36
**SESSION 53: MECHANISMS OF POST-MATING REPRODUCTIVE ISOLATION**

Chair: Hope Hollocher

10:30 345 Developmental Analysis of Female Hybrid Sterility Rescue in Crosses between *Drosophila simulans* and *Drosophila melanogaster*.
   *H. Hollocher, K. Agopian*

10:45 346 Reproductive Isolation and Sperm-Egg Incompatibility.
   *T.L. Karr, S. Pitnick*

11:00 347 Evidence for Coadapted Gene Complexes in the Marine Copepod *Tigriopus*.
   *R.S. Burton*

11:15 348 Sexual Selection against F1 Sticklebacks: Cold Showers for Young Hybrids.
   *S.M. Vamosi, D. Schluter*

11:30 349 The Evolution of Reproductive Isolation among Spatially Distributed Populations.
   *S.A. Church, D.R. Taylor*

11:45 350 Haldane's Rule is Obeyed in Taxa Lacking a Hemizygous X.
   *D.C. Presgraves, H. Orr*

**ROOM IRC-4**

Monday, June 22

10:30-12:00 **SESSION 54: MOLECULAR SYSTEMATICS - ANIMALS**

Chair: Joe Staton

10:30 351 Misled by Mitochondria?
   *T.W. Taggart, B.I. Crother*

10:45 352 Geographic Pattern of mtDNA in a Contact Zone between Two Subspecies of the Salamander *Ensatina eschscholtzii*.
   *D.S. Parks*

11:00 353 Phylogenetic Analysis of the Genus *Hemiergis* (Squamata: Scincidae) Based upon mtDNA Data.
   *J.D. Reichert, T.W. Reeder*

   *J.P. Bielawski, J.R. Gol*

11:30 355 Molecular Phylogeny of the Phylum Sipuncula Using Cytochrome Oxidase Subunit I.
   *J.L. Staton*

11:45 356 Cytochrome b as a Comparative Molecular Yardstick for Vertebrate Taxa.
   *G.C. Johns, J.C. Avise*

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**Room: Chan Centre**

Monday, June 22

1:30 – 2:30 **PRESIDENTIAL ADDRESS**

SOCIETY OF SYSTEMATIC BIOLOGISTS

Paula Mabee

***CANCELLED***
Room: IRC 2
Monday, June 22

SYMPOSIUM 5*: CHARACTER EVALUATION AND PHYLOGENETIC ANALYSIS
SOCIETY OF SYSTEMATIC BIOLOGISTS
Organizer: Mia Molvray

2:45  843  Good Characters, Bad Characters, Neutral Space and Stationarity in Molecular Data.
      *Gavin Naylor

      *David Baum

3:45  845  Should Molecular Characters be Evaluated Individually or as Classes?
      *Dick Olmstead

4:15 – 4:30  Break

4:30  846  Observations on Morphological and Molecular Characters in Phylogenetic Analysis.
      *Michael Donoghue

5:00  847  Floral Characters in Orchidaceae: Deceiving both Pollinators and Taxonomists.
      *Mia Molvray

5:30  848  Phylogenetic Spectra and Character Analysis.
      *Mike Charleston

*Note: This symposium was originally scheduled Wednesday morning.

Room: IRC 3
Monday, June 22

2:45 – 5:00  SPECIAL SESSION*: EDUCATIONAL ISSUES IN EVOLUTIONARY BIOLOGY
Chair: Peter Wimberger

2:45  919  Professional Societies and Education in Evolutionary Biology.
      *I.A. Eckstrand

3:00  920  Rationales of College Freshmen for Rejecting Evolution.
      *B.J. Alters

3:15  921  Lab Exercises in Evolutionary Biology: Building Through the Undergrad Curriculum.
      *J.M. Brown

3:30  922  Introduction to the Molecular Clock.
      *R.E. Dean

3:45  923  Seventh Graders Debate What Is Deforming the Frogs of Minnesota: A Model for Using the Internet to Build Collaborations between Research Biologists and Middle School Teachers.
      *J.L. Froehlig, D. Parks

4:00  924  Authentic Research on Salmon Population Genetics in High School and College Classrooms.
      *P.H. Wimberger

4:15 – 4:30  Break

4:30  925  Evolutionary Constraints and the Origins of Higher Taxa: Artificial Selection on Stamen Dimorphism in a Mustard.
      *K. Karoly

4:45  926  Evolution Classes at the College Level and High Schools.
W.B. Provine

*Note: This special session was originally scheduled Wednesday morning.

Room: Sub-Ballroom
Monday, June 22
2:45 – 6:00

**POSTER SESSION**
Authors will be present at their posters.
Posters remain up until Wednesday morning.

357 The Evolutionary Response of *E. coli* Membranes to Novel Thermal Environments.
*J.K. Larabee, A.G. Gibbs

358 Independent Origins of Hawaiian Cave-Dwelling Isopods.
*M.J. Rivera, G.K. Roderick, S. Taiti, F.G. Howarth

359 Cross-Generational Acclimation Effects on Fitness in *Drosophila melanogaster*.
*G.W. Gilchrist, S. Bennett

*M.A. Archer, M.R. Rose

361 Pollen-Collecting Flexibility and Larval Performance on Normal and Novel Hosts in a Specialist Versus a Generalist Osmiine Bee.
*N.M. Williams

362 Trophic Polymorphism in the Fish *Percichthys trucha* in the Patagonian Andes.
*D.E. Ruzzante, V.E. Cussac, S.J. WaldeMacchi, P.J. and Alonso, M.F.

363 Adaptation to Unpredictable Cyclic Environments: Bet-Hedging Offers Better Protection than Seedbank.
*Y. Galimov, L. Yampolsky

364 Floral Mimicry and Frequency-Dependent Selection on a Pollination by Deceit System.
*G. Jimenez C.A. Dominguez

365 Variation in Seed Size and Number of a Fleshy-Fruited Plant: Disperser-Mediated Outcome on Offspring Establishment.
*W. Parson

366 Tail Growth and Reproduction in a Temperate Lizard.
*P.L. Rutherford, P.T. Gregory

*E.K. Kupriyanova

368 Sex and Death in an Androdioecious Crustacean: Longevity Influenced by Sex Ratio in an Ephemeral Freshwater Clam Shrimp with a Mixed Mating System.
*N. Zucker, S.C. Weeks

369 *Drosophila* Sampling: Field Methods and Estimation Frequencies.
*P.C. Chabora, H.R. Koepfer

370 *Wolbachia* of the Parasitic Wasps.
*Y. Chen, W.S. Sheppard, J.J. Brown

371 The Genetic Basis of the Egg Size and Number Tradeoff in *Drosophila melanogaster*.
*L. Schwarzkopf, M.R. Blows, J.M. Caley
What to Do When Your Offspring May Have to Compete for Food and Mates? Some Experiments with *Nasonia vitripennis*.
*B.G. Lalonde, J. Niehaus, R. Houtman*

A Genetic Analysis of the Development of Size Hierarchies of *Sinapis arvensis* (Brassicaceae) in Contrasting Environments.
*D.A. Thiede, M.L. Stanton, B.A. Roy*

Evolution of Plant Architecture and Life History in the Context of Grazing.
*D.S. Posner*

Patterns of Selection on Color in an Aposematic Beetle.
*C.P. Grill, W. Snyder, R. Preziosi, A.J. Moore*

Selection on Early Fecundity Produces a Correlated Response in Migratory Ability in the Sand Cricket, *Gryllus firmus*.
*J.R. Tucker, D.J. Fairbairn, *D.A. Roff*

Ecological Genetic Study of Seasonal Variation in Flight Phenotypes in *Drosophila melanogaster*.
*P.T. Barnes, S. Pearsall, G. Paduano*

Evolution and Physiology of Late-Life Mortality Plateaus.
*M.D. Drapeau, L.D. Mueller, M.R. Rose*

Thermal Selection in *Drosophila*: Analyses of Microsatellites and Wing Morphology in Experimental Populations.
*L.M. Kann, D. Basila, D.M. Rand*

*J. Bosch, Y. Maeta, R. Rust*

Evidence for Intergall Migration and Clonal Mixing in an Aphid with Soldiers.
*D.K. Abbot*

The Effect of Relatedness on Cannibalism in the Ladybird Beetle *Harmonia axyridis*.
*S.J. Joseph W.E. Snyder, A.J. Moore*

*U.G. Reinhardt, M.C. Healey*

Costs and Benefits of Joint Nesting Behaviors in Four-Toed Salamanders.
*I.T. Knight, C.S. Wells, A. Schrecengost, R.N. Harris*

Fighting and the Evolution of Assessment: The Role of Loud Calls in Contests among Troops of Black Howler Monkeys.
*D.M. Kitchen*

Influence of Social Dominance Rank on Diet Quality of Pronghorn Females.
*J.J. Dennehy*

Sexual Selection and Parental Investment in African Lions.
*P.M. West*

Use of Likelihood to Rank Food Preferences in Eastern Gray Squirrels.
*E.L. Barthelmes*

Architecture of Mayapple: Hidden Plasticity in a Highly Constrained Growth Form.
*C.S. Jones, M.A. Watson*
Environmental Effects on Drosophila Wing Shape: A Geometric Morphometric Approach.  
*P. Galpern

Integration of Developmental Phenotypic Plasticity in Grasshoppers.  
*D.B. Thompson

*D. Berrigan

Ontogenetic Plasticity in Zebrafish, Danio rerio.  
*O.O. Konu Grantham, R.E. Strauss

Cancelled

A Geophysiological Theory of Evolution.  
*F. Santini

*F. Santini, L. Galleni

A Phylogenetic Estimator of Population Growth Rate.  
*D.A. Vasco, Y.-X. Fu

Arguments against the Cost of Sex Based on Alternation of Generations.  
*J.P. Hill, N. Huntly

Using Phylogenies to Study the Evolution of Virulence.  
*B. Rannala

Fluctuating Asymmetry in Radially vs. Bilateral Symmetrical Flowers.  
*P.R. Neal, N. Pinel

Natural Selection on Conditional Strategies in Stochastic Environments.  
*W.N. Hazel, R. Smock

Progress in Mapping Cichlid Fish Genomes: The Tilapia (Oreochromis niloticus).  
*T.D. Kocher

Publication Bias and Investigator Effects in Studies of Fluctuating Asymmetry.  
*A.R. Palmer.

Java Program for Neutrality Test.  
*Y.-X. Fu, H.-Y. Huai

Clusters of Mutation Reduce the Mutational Load.  
*H.-Y. Huai, R.C. Woodruff, Y.-X. Fu

Effects of Deleterious Mutation on Behavior in C. elegans.  
*L. Vassilieva, L. Latta, J. Ribich

On the Speed of Genomic Decay.  
*L. Loewe, S. Scherer

Spontaneous Mutational Variability for Life History Traits in Caenorhabditis elegans.  
*E.K. Davies, H.H.D. Lloyd, P.D. Keightley

Heterosis in Juvenile Earthworms (Eisenia sp.): A Comparison among Inter- and Intraspecific Hybrids.  
*T.C. McElroy, W.J. Diehl

Metapopulation Quantitative Genetics.  
*C.J. Goodnight
*K.J. O'Keefe, J. Antonovics

Analysis of Landmark Data from Articulated Structures.  
*D.C. Adams

Daily Patterns of Oviposition Mediated Sexual Conflict in a Polygynandrous Mating System.  
G. Gentile, *D.J. Fairbairn

Female Mate Choice in a Burying Beetle: Is the Male Pheromone an Indicator of Male Body Size?  
*A.E. Beeler, C.M. Rauter, A.J. Moore

Male Reproductive Success in Drosophila Selected for Semelparity and Iteroparity.  
*K.A. Hughes, R.J. Sawby, K.A. Dixon

Phenotypic Correlations among Behavioral Traits: Mating Displays and Predator-Avoidance Behavior in Male Field Crickets.  
*A.V. Hedrick

Combat and Morphology in Fiddler Crabs (Genus Uca).  
*M.S. Rosenberg

Correlates of Female Coloration in an Unusual Population of Stickleback.  
*J.S. McKinnon

Frequency Dependent Mate Choice in Wild Guppies (Poecilia reticulata).  
*K.A. Hughes, F.H. Rodd, D.N. Reznick

Evolutionary Response to Climate Change: What Can Geographic Variation Tell Us?  
*K. Schwaegerle, H. McIntyre

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Post-Glacial Phylogeography and Genetic Structure: Inferences from Microsatellite DNA Markers in the Glade Mallow, Napaea Dioica.  
*J.P. Wenger

A Look at the Genetic Structure of the Neotropical Malaria Vector, Anopheles aquasalis.  
*T.L. Fairley, J. Conn

Genetic Structure within a Chromosomally Variable Weta Species (Orthoptera, Stenopelmatidae).  
*M. Morgan-Richards, G. Wallis

The Size of a Fly in Nature.  
*A.C. James, R.B.R. Azevedo, L. Partridge

*J.M. Hoekstra, H.A. Woods

Biogeography of the Tropical Eastern Pacific: Distribution and Phylogeny of Chaenopsid Blennies (Teleostei).  
*P.A. Hastings

Diversity among North American Strains of Myxobolus cerebralis (Causative Agent of Whirling Disease in Salmonid Fish) and its Host, Tubifex tubifex.
*A.E. L. Colwell, C. Rasmussen, J.R. Winton

Have Trophic Polymorphisms in Northern Freshwater Fishes Evolved via Character Release?
* B.W. Robinson

Microsatellite Analysis of Coast-Wide Population Structure of Coho Salmon (Oncorhynchus kisutch).
*C.T. Smith, J.R. Nelson, B.F. Koop

Biogeography of the Southeastern U.S.: Comparison of Ambystoma mtDNA Phylogenies.
*E.J. Routman, M.F. Donovan, R.D. Semlitsch

Mitochondrial DNA Affinities of the Peoples of North-Central Mexico.
L.D. Green, J.N. Derr, *A. Knight

Molecular Biogeography of Australian Avifauna.
*C.M. Hess, S.V. Edwards

Clonal Structure of the Endangered Malacothamnus abbottii (Malvaceae).
*M. Tommerup, E. Friar

Effects of Selfing, Intra- and Interpopulation Crossing on Progeny Fitness in Small and Large Populations of Gentianella germanica.
*S. Paland, B. Schmid

Exploring a Hidden Population Crash: Genetic Diversity in Cultivated Avocado.
*K.D. Birnbaum

Hybridization among Endemic and Naturalized Species of Rubus (Rosaceae) in the Hawaiian Islands.
*R.A. Randell, S.O. Grose, D.E. Gardner, C.W. Morden

*K.K. Ingram, S.R. Palumbi

What the Deads Could Tell Us.
*L.L. Vassilieva, V.V. Vassiliev

*L.K. Park, J. Hard, P. Moran, G.A. Winans

Historical Scale Archives Provide a Valuable Source of Material for Conservation Genetics Research in Pacific Salmon.
*P. Moran, J. Baker

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Risks of Extinction for Pacific Salmon: Mutational Meltdown and the Impact of Hatchery Fish.
*P. McElhaney, J. Conery, K. Kostow, M. Lynch

A Comparison of Simulated and Empirical Microsatellite Variation in a Historically Bottlenecked Island Finch.
*C.L. Tarr, J.D. Ballou, M.P. Morin, S. Conant

Genetic Structure and Patterns of Mating in an Endemic Island Species, the Guadeloupe Woodpecker (Melanerpes herminieri).
*M.M. Peacock, P. Villard

Distinguishing Two Subspecies of Reindeer (Rangifer tarandus) Using Mitochondrial and Microsatellite Markers.
P.A. Katajisto, S.-L. Varvio, J.J. Palo

Phylogenetic Variation in the Quokka, Setonix brachyurus (Marsupialia: Macropodidae).
*E.A. Sinclair

Populations Through Time: Modern and Historical Genetic Diversity in the Endangered Black-Footed Ferret.
*F.X. Villablanca

A Molecular Phylogenetic Study of the Cospeciation between Passerines and Mites.
*L. Dunspach, G. Spicer

Cancelled

Coexistence Mechanisms of Foragers - A Simulation Study.
*W.G. Wilson, S. Richards

Detecting Incongruence between Host and Parasite Phylogenies Using the Partition Homogeneity Test.
*D.M. Drown, K.P. Johnson, D.H. Clayton

Herbivore Damage to Local and Non-Local Populations of Lotus scoparius in a Common Garden Study.
J.J. Kempton, *A.M. Montalvo

Insect Diversification Across Host-Plant Hybrid Zones of the Hawaiian Silversword Alliance.
*G.K. Roderick, E.C. Metz, R.H. Robichaux

Linking Susceptibility, Virulence, and Resistance to Within-host Parasite Population Dynamics.
*M.A. Gilchrist, W.G. Wilson

The Condition for Coexistence and Estimating the Probabilities of Different Ecological Scenarios.
*C. Damgaard

When Good Algae Go Bad: The Breakdown of Mutualism between a New Strain of Symbiodinium and its Host.
*A.J. Sloan

Is the Radiation in Calochortus Flowers Accompanied by Shifts in Floral Visitors?
*J. Dilley, P. Wilson

The Birds & the Bees: Is There Anything to Pollination Syndrome?
*M. Valenzuela, P. Wilson

Floral Organ Loss and Synorganization in Amorpheae: Inferences of Structural Homology.
*M. McMahon, L. Hufford

Flower Development and the Evolution of Inbreeding in Tomato.
*M.S. Georgiady, E.M. Lord

MADS-box Genes in Welwitschia - Flower Origins and Phylogenetics.
*S.I. Fuerstenberg, W.M. Brown

The Role of the Floral Symmetry Gene, Cycloidea, in Stamen Abortion in Mohavea (Scrophulariaceae-Antirrhineae).
*L.C. Hileman, D.A. Baum

Embryogenesis During Alternate Modes of Development of a Cockroach: Analysis of Development.
*J.R. Blankenship, P.J. Moore, L.S. Corley, A.J. Moore
Molecular Genetic Analysis of Mating System Evolution in *Caenorhabditis*.
*E.S. Haag, J. Kimble*

Effects of Environmental Stress on Interaction between Morphological Integration and Developmental Stability.
*A.V. Badyaev, C.T. Fiumara, K.R. Foresman*

Genetic Analysis of an Eyeless Strain of Mice: A Study Toward Understanding Eye Morphogenesis and Evolution.
*P.K. Tucker, V. Kule, L. Laemle, T. Glaser*

Correlation Analysis of Floral Morphology and Genetic Distances for 12 Populations of *Lotus scoparius* in Southern California.
*D.J. Weaver, A.M. Montalvo*

Crop Evolution in *Amaranthus*: Evidence from Low Cot DNA Markers.
*M. Sun, H. Chen, F.C. Leung*

Cancelled

Inter- and Intraspecific Variation in Three *Allium* Species.
*V.V. Symonds, K.A. Schierenbeck, J.F. Smith, B. Hellier*

Lack of Population Differentiation in *Purshia tridentata*.
*J.P. Shatford, P.G. Krannitz*

Cancelled

Local, Stochastic Seed Dispersal Permits Maintenance of Less Fit Genotypes in a Southern Appalachian Forest.
*E.A. Macklin, J.S. Clark*

Patterns of Resistance and Virulence in the *Microbotryum violaceum-Silene alba* Interaction.
*A.M. Jarosz, E.J. Lyons, A.L. Davelos*

Variation in Glycerate Dehydrogenase and Stomatal Size in Pinyon Pine Associated with Soil Moisture.
*J.B. Mitton, M.C. Grant*

Levels of Mitochondrial and Nuclear Variation in Fig Wasps.
*C.A. Machado, E.A. Herre*

Contrasting Patterns of Dispersal and Gene Flow in the Fire Ant *Solenopsis invicta* Revealed by mtDNA Markers.
*C.J. DeHeer, M.A.D. Goodisman, K.G. Ross*

Genetic Structure of a *Pinus leiphyllo* Population Affected by the Bark beetle *Dendroctonus adjunctus*.
*C. Vargas, R. Cisneros, B. Rodriguez*

Inbreeding Effects on Host Shift Potential in the Phytophagous Beetle *Ophraella*.
*L.L. Knowles, A.L. Coelho, *D.J. Futyma*

Selection and Gene Flow in Multiple-Queen Colonies of the Fire Ant *Solenopsis invicta*.
*M.A.D. Goodisman, M.A. Asmussen, K.G. Ross*

Genetic Differentiation at Four Intron Loci in Latin American *Ceratitis capitata*: Whence the Medfly of '96?
*N.K. Davies, G.X. Roderick, F. Villablanc*

Cancelled
Genetic Variation in *Daphnia pulex* Using Rapid Markers.
*B.A. Saunders, D.J. Innes

Microsatellite Patterns in the Egg Bank of the Diapausing Crustacean, *Daphnia exilis*.
*M.W. Hahn

Population Genetics of the Black Abalone (*Haliotis cracherodii*).
*D.E. Hamm

The Implications of Inter- and Intramarsh Genetic Variability in the Ribbed Mussel, *Geukensia demissa*.
*A.E. Stiven

Genetic and Morphometric Variations in the Snow Crab, *Chionoecetes opilio*, in Eastern Canada.
*J.-M. Sevigny, B. Sainte-Marie

Genetic Differentiation among Michigan Populations of *Cryphocentria parasitica*.
*A.L. Davelos, D.W. Fulbright, A.M. Jarosz

Microsatellites for Ecologists: Nonradioactive Isolation and Detection of Microsatellite Polymorphisms in the Dungeness Crab.
*R.J. Toonen, P. Jensen

A Test for Genetic Selection Among Alternative Male Phenotypes of Sockeye Salmon.
*D.J. Hoysak, N.R. Liley, E.B. Taylor

*J. Dever, L.D. Densmore

Multiple Paternity of Garter Snakes.
*T. Garner, B.F. Koop, P. Gregory

Development of Microsatellite PCR Primers for Two Great Basin Cyprinids (*Gila bicolor* and *Rhinichthys osculus*).
*V. Katju, G.A. Hoelzer

Direct and Correlated Responses to Artificial Selection on Thermal Stress Tolerance in a Livebearing Fish.
*C.F. Baer

Hake Populations in Patagonian Waters: Off-shore/In-shore Differentiation?.
*M.E. D'Amato

Genetic Differentiation among Lake Trout Populations in Lake Superior Using Microsatellite Analysis.
*E.H. Leder, R.B. Phillips, M. Burnham-Curtis, C.R. Bronte

Improbable Persistence: Effective Population Size, Ecology, and the Evolution of Death Valley Pupfishes (Genus *Cyprinodon*).
*J. Wilcox, A.P. Martin

Evolution of the House Mice (*Mus musculus*) in Taiwan: Evidence from Variation of the mtDNA Control Region.
*S.-T. Yang, H.-T. Yu

Genetic Structure of Populations of the House Mice (*Mus musculus castaneus*) in Taiwan: Evidence from Microsatellite DNA Markers.
*Y. Peng, H.-T. Yu
The Origin of Individual Robertsonian Translocations in *Mus domesticus* Inferred from Linked Microsatellite Polymorphisms.
*C. Riginos, M.W. Nachman*

A Scan for Linkage Disequilibrium Across the Human Genome.
*G.A. Huttley, W. Smith, M. Carrington, S.J. O'Brien*

The Apportionment of Human HLA Diversity.
*D. Meyer, E. Genin*

Gene Genealogies, DNA Fingerprints and Clonal Evolution in a Haploid Organism.
*I. Carbone, J.B. Anderson, L.M. Kohn*

*R.-C. Yang*

The Two Phases of the Coalescent and Fixation Processes.
*R.B. Campbell*

A Biogeographic Analysis of Intrapopulational cpDNA Haplotype Diversity in Four Species of *Packera*.
*J. Golden, J. Yates, J.F. Bain*

Hybrid Zones: Order or Ephemera?
*M.R. Bulger*

Test of the Minority Cytotype Exclusion Hypothesis in Experimental Populations of Diploid and Tetraploid *Chamerion angustifolium*.
*B.C. Husband*

Autosome-Y Interactions Explain Male Sterility in *Anastrepha fraterculus* and *A. sororcula* Hybrids.
*P. Santos, S.R. Matioli*

Reinforcement, Gene Flow and Speciation: No Evidence of Sympatric Introgression between *Drosophila pseudoobscura* and *D. persimilis*.
*R.J. Kulathinal, R.S. Singh*

Life History Variation in a Hybrid Zone of *Mytilus edulis* and *M. trossulus* in Eastern Canada.
*J.E. Toro, D.J. Innes, R.J. Thompson*

Effects of Interspecific Hybridization on Morphological Integration of the Cranial Skeleton - a Case Study.
*V. Gavrilovic, D.D. Cvetkovic*

Hybridization Induced Genome Remodelling: Observations from Chromosome Painting.
*R.J.W. O'Neill, J.A.M. Graves*

Undermethylation, Retroelement Activation and Genome Remodelling in an Interspecies Mammalian Hybrid.
*R.J.W. O'Neill, M.J. O'Neill, J.A.M. Graves*

A Mating System Novelty in *Iris Lacustris*: Female Sterility and its Implications.
*G.L. Hannan*

Impacts of Floral Predation and Anther-Smut Infection on the Mating System of Gynodioecious *Silene acaulis*.
*L.A. Hermanutz, L.J. Anstey*

Localized Beneficial Impact of Foliar Damage in a Cucurbit. Who's Picking Up the Tab?
*G. Avila Sakar, A.G. Stephenson

*L.M. Zahn

522  Seed Provisioning in Gynodioecious *Silene acaulis* (Caryophyllaceae).  
L.F. Delph, *M.F. Bailey

523  Segregation of Proteins Associated with Self-Incompatibility in *Campanula rapunculoides*  
(Campanulaceae).  
*S.V. Good, A.G. Stephenson

524  Sex Ratio Variation and Sex Allocation of Males, Females and Hermaphrodites in  
Wild-Strawberry (*Fragaria virginiana*; Rosaceae).  
*S.M. Baughman

525  Sperm Storage or Deceit? the Role of the Genital Bursa in Female Dungeness Crabs.  
*P.C. Jensen, P. Bentzen

526  Brood-Level Genetic Variation in the Trinidad Guppy.  
*J.S.P. Sanny, J.S. Taylor, F. Breden

527  Behavioral Predictions of Population Genetic Structure in an Old World Tent-Making Bat,  
*Cynopterus sphinx* (Megachiroptera).  
*J.F. Storz, H.R. Bhat

528  Molecular Study of the Mating System of *Cebus apella* and its Implications for the Evolution of  
Sociality in Primates.  
*P. Escobar-Paramo

529  Tests of Significance in Maximum Likelihood Paternity Analysis.  
*T. Meagher

530  Accelerated Evolution of Plastid rRNA and Elongation Factor Genes in Nonphotosynthetic Algae  
Due to Reduced Protein Synthethic Load.  
D. Vernon, *C.W. Birky, Jr.

531  Molecular Evolution of Flower Development Genes in *Brassica oleracea*: Patterns of Duplication  
and Variation.  
*A.C. Lowman, M.D. Purugganan

532  Molecular Evolution of the Flower Development Pathway: Comparison between *Arabidopsis thaliana* and *Arabis lyrata*.  
*A.L. Lawton Rauh, E.S. Buckler, M.D. Purugganan

533  Analysis of Nucleotide Sequence Evolution at the Period Locus in Endemic Hawaiian  
*Drosophila*.  
*D.G. Baer, T.W. Lytle

534  Large-Scale Survey of Nucleotide Polymorphism of the *Drosophila melanogaster* Fourth  
Chromosome, a Non-Recombining Genetic Element of Extremely Low Genetic Diversity, Using  
Denaturing High-Performance Liquid Chromatography (DHPLC).  
*M.A. Jensen, M. Kreitman, B. Charlesworth

535  The Adh-Related Gene Is Probably Ubiquitous in the *Drosophila* Genus.  
*E.E. Betran, M.M. Ashburner

536  Phylogeny of South American *Rhagoletis* (Diptera: Tephritidae).  
*M.P. Jaycox, J.J. Smith, D. Frias, G.L. Bush

537  Phylogeny of *Carpomyina* (Diptera: Tephritidae).
Concerted Evolution of the Ribosomal DNA Intergenic Spacer in *Daphnia*.
*C.D. Prokopowich*

Molecular Evolution of Gender Associated Mitochondrial Lineages in Unionacean Bivalves.
*J.P. Curole, T.D. Kocher*

Flanking Sequence Variation and Microsatellite Evolution in *Poecilia*.
*J.M.H. Durkin, J.S. Taylor, F. Breden*

Molecular Evolution of the Nramp Gene Family: New Perspectives from Teleost Fishes.
*M.O. Dorschner, R.B. Phillips*

Phylogeography and Gene Flow in the Canyon Treefrog, *Hyla arenicolor*.
*P.H. Barber*

Large-Scale Genomic Sequencing in the MHC Class II Region of the House Finch (*Carpodacus mexicanus*).
*J. Gasper, D. Garrigan, C. Hess, S. Edwards*

Cancelled

Identification of Recent Genomic Integrations of the Mouse B1 Transposable Element.
*D.H. Kass, K.O. Booker S.J. Durkee, T.M. Williams*

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Reciprocal Comparison of Microsatellite Variability in Mink and Ermine.
*M.A. Fleming, E.A. Ostrander, J.A. Cook*

Within-Lineage Mutations Observed in the Human mtDNA Control Region (Detection by Denaturing High Performance Liquid Chromatography).
*T.J. Parsons, J. Devaney, M.L. Cariola, A.B. Hangar*

Molecular Evolution of Introns within Populations and Species.
*V.L. Friesen, B.C. Congdon, T.P. Birt, M.G. Kidd*

Allelic Variation in Two Virulence Genes (mip and dotA) Implicated in Invasion and Intracellular Survival and Replication in *Legionella pneumophila*.

Bayesian Analysis in Molecular Biology and Evolution.
*B. Larget, D. Simon*

Complementary Coding Exemplified by the rev Responsible Element (RRE).
*M. Schoeniger*

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Ancient DNA in Greenlandic Ice Cores.
*E. Willerslev, A.J. Hansen, P. Arctander, B. Christensen*

Phylogeny and Circumscription in *Calopogon* (Orchidaceae) as Inferred from ITS Sequence and AFLP Data.
*D.H. Goldman, M.W. Chase, M.F. Fay*

Rates of Molecular Sequence Evolution in Annual Versus Perennial Taxa.
*C.D. Bell, R. Battaglia, R. Patterson*

Comparative Genomic Analysis of the DExH DNA Helicase Gene Family.
*R.M. Bruskiewich*
558 Systematics of *Arctostaphylos* (Ericaceae).
*L.M. Boykin, R.W. Patterson, V.T. Parker, M. Vasey

559 The Origin of the Bencomia Alliance (Rosaceae) in Macaronesia.
*D.M. Helfgott, J. Francisco-Ortega, R.K. Jansen, B.B. Simpson

560 Phylogenetic Relationships among 14 *Gryllus* Species Using DNA Sequences of Two Mitochondrial and One Nuclear Genes.
*Y. Huang, M. Sutherlin, G. Orti, A. Zera

561 Phylogeny of Twelve *Triphadia* Species (Coleoptera:Chrysomelidae) Based on Mitochondrial 12S rRNA and COI Data.
*Z. Swigonova, T. Hsiao, F. Messina, K. Kjer

562 Evolution and Phylogenetic Utility of the Period Gene in Lepidoptera.
*J.C. Regier, Q.Q. Fang, C. Mitter, R.S. Peigler

563 Systematics of an Endemic Radiation of Madagascan Butterflies (Lepidoptera: Satyrinae: Mycalesina) Based on Total Evidence.
*E. Torres, R.K. Wayne, D.C. Lees, C. Kremen

564 Phylogenetic Utility of 28 S Ribosomal DNA in *Drosophila*.
*G. Spicer, C.D. Bell, K.R. Peterson

565 The Use of Mitochondrial and Nuclear Genes to Investigate Phylogenetical Relationships in the *repleta* Radiation (Genus *Drosophila*).
*R.A. de Brito, M.H. Manfrin

566 Family Level mtDNA Sequence Comparisons of Diptera (Flies): Problems and Prospects for Phylogenetic Reconstruction.
*A.T. Beckenbach, T. Laberge

*S. Jordan, D.A. Polhemus, C. Simon

568 Convergence vs. Phylogeny in the Systematics of Trigonalid Wasps.
*D.A. Carmean

569 How Heterogeneous are ITS 1 and ITS 2 within Individuals?
*D.J. Harris, K.A. Crandall

570 Mitochondrial Gene Order and Arthropod Phylogeny.
*D.V. Lavrov, J.L. Boore, W.M. Brown

571 Molecular Phylogeny of the Lithodidae (Anomura; Crustacea).
*S.D. Zaklan, C.W. Cunningham

572 The Mitochondrial Genome of the Brachiopod *Terebratalia transversa*.
*K.G. Helfenbein, J.L. Boore, W.M. Brown

573 An Unusual Piscine Phylogeny.
*A.-S.G. Rasmussen, A. Janke, U. Arnason

574 Genetic Relationship between Masu and Amago Salmon Examined Through Sequence Analysis of Nuclear and Mitochondrial DNA.
*S.J. McKay, I. Nakayama, M.J. Smith, R.H. Devlin

575 Locus Specific Intron Primers in Actinopterygian Fishes: Intraspecific and Interspecific Utility.
*W.J. Jones, J.M. Quattro

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576  Cancelled
577  Phylogenetic Analysis of Lake Malawi Cichlid Fishes Using AFLPs.
* C. Albertson, T.D. Kocher
578  Phylogenetic Analysis of Ribosomal ITS1 Sequences Supports Three Subgroups of Dolly Varden
Char (Salvelinus malma).
* R.B. Phillips, L.I. Guedex, K.M. Westrich, F. DeCicco
579  Can Mitochondrial Sequence Data Resolve Higher Level Relationships within the Galliformes?
* E.L. Braun, R.T. Kimball
580  Craciformes are More Closely Related to Anseriformes Than to Galliformes as Suggested by mt
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*s.L. Pereira, A. Wajntal
581  A mtDNA Phylogeny of the Genus Dipodomys.
* D.B. Pires, G.S. Spicer
582  Megachiropsidae Intergeneric Relationships Based on Mitochondrial rRNA Gene Sequences.
M.L. Romagnoli, D.J. Kao, * M.S. Springer
583  Molecular Phylogeny of the Genus Reithrodontomys (Rodentia: Muridae).
* E. Arellano, D.S. Rogers
584  Molecular Systematics of North American Hares (Lepus): Evidence from Cytochrome B and 16S
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* F.X. Gonzalez, D.S. Rogers, F.A. Cervantes
585  Systematics of the Endemic Red-Backed Vole of Southeast Alaska.
* A.M. Runck, J.A. Cook
586  Molecular Epidemiology of Hantavirus in Taiwan Based on Phylogenetic Analysis.
587  Molecular Phylogenies and the Evolution of Dinoflagellate-Invertebrate Symbioses.
* T.P. Wilcox
588  Phylogeny of Retroviridae Using Whole Genomes and Partitions.
* D. Posada, K.A. Crandall
589  The Evolutionary History of Frogs and their Lung Flukes Told by DNA.
* V. Leon-Regagnon, D.R. Brooks, G. Perez-Ponce de Leon
590  Does the T-PTP Test Tell Us Anything We Want to Know?
* J. Harshman
591  Gene-Based and Structure-Based Partitions: Maximum Likelihood Analyses of Mammal
Mitochondrial DNA Data.
* R.W. DeBry
592  Quantifying Sources of Error in AFLP.
* N.J. Garnhart, T.D. Kocher
593  The Utility of Opsin Genes in Molecular Systematics: Resolving Issues of Base Composition and
Codon Bias.
* B.S. Chang, D.L. Campbell
594  Use of Incremental Bootstrapping to Investigate Sampling Properties of Protein Coding
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* J.P. Bielawski, J.R. Gold
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* A. Grapputo, A. Pilastro, G. Marin

Molecular Systematics of Lower Central American Hyphessobrycon: A Test of Bussing's Model.
* G. Ybazeta, E. Bermingham

Are Skunks Mustelids?
* J.W. Hsu, M.A. Nedbal, J.J. Flynn

Building Phylogenetic Trees Based on Minimizing Inconsistencies among the Trees for Quartets of Taxa.
* S.J. Willson

Disparity and the Cambrian Radiation.
* L.H. Smith, B.S. Lieberman

Relationships among Haplotypes of Barley Yellow Dwarf Virus: Do Clades Share Host Species or Localities?
* S.K. Remold

Testing Hypotheses of Coevolution and Biogeography among the Marine Fish Kyphosus and its Digenean Fauna.
* G. Perez-Ponce de Leon, V. Leon Regagnon, D.R. Brooks

The Systematics and Floral Host Relationships of the Andrena krigiana Group. (Hymenoptera: Andrenidae: Callandrena)
* L.L. Larkin, J.L. Neff, B.B. Simpson

Hybrid Speciation in Encelia virginensis (Asteraceae): Evidence from Multiple ITS. Chimeras.
* C. Clark, R. Pant, G.J. Allan

Rapid Sequence Divergence in Sex-Related Genes. Are Sexual Traits the Main Target of Change During Speciation?
* A. Civetta, R.S. Singh

Host Plant - Associated Genetic Differentiation in a Polyphagous Grasshopper, Schistocerca emarginata.
* E.B. Dopman, G.A. Sword

Recent Explosive Speciation of Enallagma Damselflies: Effects on Species Diversity in 2 Habitats.
* J.M. Brown, M.A. McPeek

Unexpected Distribution of mtDNA Variation in a European Bushcricket (Katydid).
* J.M. Gleason, M.G. Ritchie

Hawaiian Flower Spiders: Molecular Phylogenetics of a Newly Discovered Radiation.
* J.E. Garb, R.G. Gillespie, G.K. Roderick

* R.G. Gillespie

Does Divergence in Allorecognition Behavior Drive Speciation in a Family of Colonial Marine Invertebrates?
* S. Cohen

Patterns of Speciation in Frogs.
* M.M. Sasa, P.T. Chippindale N.A. Johnson

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The Role of Sex Determining Mechanisms in Sympatric Speciation.
*D.E.L. Promislow, D. Hoyt

Evolution by Natural Selection in 13 Weeks or Less.
*M.W. Salata

The Evolution of Evolutionary Thinking in Undergraduate and Graduate Students Under the Selective Pressures of UC Berkeley.
*M. Marlowe, J.L. Froehlig

*T.M. Bert, B. Chernoff

TUESDAY, JUNE 23

8:30 – 12:00 SYMPOSIUM 6: SIMULATED EVOLUTION AND THE ORIGIN OF LIFE.
SOCIETY FOR THE STUDY OF EVOLUTION
Organizer: Niles Lehman

*Niles E. Lehman

9:00 618 Probing the Structural and Catalytic Repertoire of RNA and DNA.
*Ronald Breaker

9:30 619 Knight Moves: In vitro Evolution and a DNA Computer.
*Laura Landweber

10:00 – 10:30 Break

10:30 620 RNA Catalysis in Chemical Evolution.
*Bruce Eaton

11:00 621 The Limits of Nucleic Acid Catalysis.
*Dipankar Sen

11:30 622 The Translation Repertoire in Early Evolving Systems.
*Margaret Saks

8:15-10:00 SESSION 55: COEVOLUTION/SPECIES INTERACTIONS – PARASITES, PARASITOIDS
Chair: Paul Schmid-Hempel

8:15 623 Coevolution and Variability in Social Insects and their Parasites.
*P. Schmid-Hempel

8:30 624 Geographic Structure of Parasitoid-Host Interactions: Patterns of Population Structure for Two Parasitoid Species and their Hosts.
*D.M. Althoff, J.N. Thompson

8:45 625 Parasitoid Decisions on Novel and Familiar Hosts.
*H.R. Koepfer, P.C. Chabora

9:00 626 Parasitic Infection in Daphnia: Genes Versus Ecology.
9:15  627  Local Adaptation and Genetic Variation in Daphnia-Parasite Interactions.
*H. Carius

9:30  628  Parasite Virulence and Host Stress.
*J. Jokela

*M.F. Dybdahl, C.M. Lively

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Room IRC 4
Tuesday, June 23

8:15-10:00  SESSION 56: HYBRID ZONES
Chair: Theresa Bert

8:15  630  Evolutionary Trends and Recombinational Speciation in a Sunflower Hybrid Zone.
*S.E. Carney, L.H. Rieseberg

8:30  631  Survival of Parental and Hybrid Offspring Across an Ipomopsis Hybrid Zone.
*D.R. Campbell, N.M. Waser

8:45  632  Floral Isolation Across an Aquilegia formosa/A. pubescens Hybrid Zone.
*M. Fulton, S. Hodges

9:00  633  Components of Reproduction in a Stone Crab (Genus Menippe) Hybrid Zone: Searching for Evidence of Reduced Hybrid Fitness.
*T.M. Bert, S. Geiger, K. McCarthy

9:15  634  Population Dynamics of a Hybrid Zone Accompanying the Invasion of the Rusty Crayfish in Northern Wisconsin.
*W.L. Perry, J.L. Feder, D.M. Lodge

9:30  635  Can Local Climate Patterns Influence the Structure of a Field Cricket Mosaic Hybrid Zone?
*C.L. Ross

9:45  636  Genetic Structure in a Hybrid Zone between Chromosomal Races of House Mice: Evidence from Microsatellite DNA.
*C.J. Hanus, M.W. Nachman

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Room Henn 201
Tuesday, June 23

8:15-10:00  SESSION 57: PHYLOGENY-BASED COMPARATIVE ANALYSES
Chair: Trevor Price

8:15  637  Multiple Origins of Nonplanktrotrophic Species in the Marine Gastropod Genus Conus.
*T.F. Duda, S.R. Palumbi

8:30  638  Phylogeny of the Agriotypinae (Hymenoptera: Ichneumonidae) with a Discussion of the Evolution of Aquatic Parasitism in Hymenoptera.
*A.M. Bennett

8:45  639  Cancelled

9:00  640  Phylogeny of African Lipotyphlans Based on Morphological and Protein Sequence Data.
*R.J. Asher

9:30 642 A Phylogenetic Analysis of the Evolution of Sexually Dimorphic Coloration in the Yarrow's Spiny Lizard (Sceloporus jarrovi Complex).
*J.J. Wiens, T.W. Reeder, A. Nieto Montes de Oca

9:45 643 Adaptive Radiations of Warblers on Two Continents.
*T.D. Price, H.L. Gibbs, A.D. Richman

Room Henn 202
Tuesday, June 23
8:15-10:00 SESSION 58: SPECIATION AND CLADOGENESIS
Chair: Craig Moritz

*S. Masta

8:30 645 Speciation and Historical Biogeography of Tropical Rainforest Invertebrates.
*C. Moritz, A. Hugall, B. Rusell, J. Ovenden

8:45 646 Divergence in a Sea Urchin Gamete Recognition Protein Parallels Reproductive Isolation and Not Genomic Divergence Across the Isthmus of Panama.
*M.A. McCartney, H.A. Lessios

9:00 647 Sympatric Sister Species and Rapid Sperm Protein Divergence in Tegula Snails.
*M.E. Hellberg

*J.D. Witt, P.D.N. Hebert

*A.M.V. Brown

9:45 650 Ecological Settings of Host Capture: Precursors to Parasite Speciation.
*S.N. Bennett

Room Henn 200
Tuesday, June 23
8:15-10:00 SESSION 59: MATING (BREEDING) SYSTEMS - ANIMALS
Chair: David Carlon

8:15 651 Mating System and Population Structure of a Tropical Reef Coral.
*D.B. Carlon

8:30 652 Testing a Model for Maintenance of a Mixed Mating System: Encounter Rates between Males and Hermaphrodites of an Androdioecious Crustacean are Not Random.
*V.L. Medland, N. Zucker, S.C. Weeks

8:45 653 Ecological Differences between Sexual and Obligately Asexual Daphnia pulex.
*D.J. Innes, C.J. Fox, G.L. Winsor

9:00 654 Microsatellite Analysis of Parentage and Cuckoldry in the Redbreast Sunfish, Lepomis auritus.
*J.A. DeWoody, D.E. Fletcher, W.S. Nelson, J.C. Avise

9:15 655 Microsatellite Evidence for Sneaking and Egg Stealing in Fifteenspine Sticklebacks.
*A.G. Jones, S. Ostlund-Nilsson, J.C. Avise

9:30 656 Polygyny, Mate-Guarding, and Posthumous Fertilizations as Alternative Male Mating Strategies.
*K.R. Zamudio, B. Sinervo
9:45 657 Genetic Analysis of Cooperative Breeding in Meerkats.
*A.S. Griffin, J.M. Pemberton, T.H. Clutton-Brock

Room IRC 5
Tuesday, June 23
8:15-10:00 SESSION 60: INBREEDING DEPRESSION
Chair: Shawn Meagher
8:15 658 Competition Reveals Severe and Sex-Biased Inbreeding Depression in House Mice.
*S. Meagher, W.K. Potts
8:30 659 Inbreeding Depression and Population Persistence in Silene alba.
*C.M. Richards
8:45 660 Biparental Inbreeding and Offspring Fitness in a Gynodioecious Species.
*L.F. Delph
9:00 661 Inbreeding Depression Due to Slightly Deleterious Mutations in Finite Populations: Size Does Matter!
*T. Bataillon, M. Kirkpatrick
9:15 662 Inbreeding Depression in the Outcrosser Arabis petrea.
*C. Vogl
9:30 663 Inbreeding Depression Under Joint Selfing, Outcrossing, and Asexuality.
*C. Muirhead, R. Lande
9:45 664 Inbreeding and Inbreeding Depression: Linking Molecular and Quantitative Genetics.
*B.G. Milligan

Room Hebb Th
Tuesday, June 23
8:15-10:00 SESSION 61: PHYLOGENETIC METHODOLOGY
Chair: Allen Rodrigo
8:15 665 A Comparison of the Phylogenetic Jackknife and Phylogenetic Bootstrap.
*A.G. Rodrigo
8:30 666 Character Weighting in Phylogenetic Analyses - Evidence from Simulations and Real Data.
*B. Oxelman, T. Eriksson
8:45 667 Bad Day at Big Tree: How Tree Reconstruction Methods Fail on Large Trees.
*K.A. Rice, T.J. Warnow
9:00 668 Comparison of Three Methods for Approximating Maximum Likelihoods in Phylogenetic Tree Searches.
*J.S. Rogers, D.L. Swoford
*T. Eriksson, A.D. Yoder
9:30 670 Factors Influencing Phylogenetic Inference: A Case Study of the Mammalian Carnivores.
*O.R.P. Bininda-Emonds
9:45 671 Strongest Evidence Parsimony: Maximum Phylogenetic Signal as a New Cladistic Inference Criterion.
*B.A. Salisbury
8:15-10:00  **SESSION 62: PHENOTYPIC PLASTICITY – COSTS AND CONSTRAINTS**  
Chair: Thom DeWitt  
8:15  672  Costs and Limits of Phenotypic Plasticity: Tests with Predator-induced Morphology and Behavior in a Freshwater Snail.  
*T.J. DeWitt  
8:30  673  Measuring the Cost of Plasticity in *Daphnia pulex*.  
*S.M. Scheiner, D. Berrigan  
8:45  674  Developmental Constraints on Shade-Avoidance Responses.  
*C. Weinig  
9:00  675  Plastic Elongation Responses in Natural Populations of *Impatiens capensis*: Expression and Maintenance of Plasticity.  
*K. Donohue  
9:15  676  Does a Cost of Homeostasis Explain the Persistence of Non-Adaptive Plasticity in Leaf Traits in an Annual Plant?  
*A. Winn  
9:30  677  Testing for Density-Dependent Selection and Costs of Plasticity in *Arabidopsis thaliana*.  
L. Dorn, E. Hammond, *J. Schmitt  
9:45  678  Costs of an Inducible Morphological Defense in Crucian Carp.  
*L.B. Pettersson, C. Brönmark

8:15-10:00  **SESSION 63: CONSERVATION GENETICS - MAMMALS**  
Chair: Brian Bowen  
8:15  679  Comparative Biogeography of North American Flying Squirrels Based on Multiple Molecular Data Sets.  
*R. Browne, B. Arbogast, P. Weigl  
8:30  680  Phylogeography of the West Atlantic Manatees: How Many Populations and How Many Species?  
A.I. Garcia-Rodriguez, *B.W. Bowen  
8:45  681  Conservation Genetics of Kermode Bears in Northwestern British Columbia.  
*H.D. Marshall, K.M. Ritland  
9:00  682  Loss of Variation in the Landlocked Lake Saimaa Seal During 9000 Years of Isolation.  
*J.U. Palo, H. Mäkinen, R. Vainola  
*K.K. Fear, B.L. Taylor, S. Chivers  
9:30  684  Population Genetics of the Northern Elephant Seal.  
*C. Garza  
*T.J. Ward, J. Bielawski, S.K. Davis, J.N. Derr

10:30-12:00  **SESSION 64: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - FISH**
Chair: Mark Belk

10:30 686 Cancelled

10:45 687 Competition and Biogeography of Marine Fishes.  
*S. Grant, B. Bowen

11:00 688 Counter-Gradient Variation in Growth Rate of Leatherside Chub, Gila copei: Environmental or Phylogenetic Effects.  
*M.C. Belk, J.B. Johnson, M.E. Smith, K.W. Wilson

11:15 689 Environmental Correlates to Spatiotemporal Variation in Population Density and Male Life History Strategy in Coho Salmon (Onchorhynchus kisutch).  
*K.K. Young

11:30 690 Historical Relationships among Populations of Pantosteus (Teleostei, Catostomidae) in the Desert Southwest.  
*C.L. Secor, T.E. Dowling

11:45 691 Experimental Evidence of Declining Interspecific Competition During Character Displacement.  
*J.R. Pritchard, D. Schluter

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Room Henn 202  
Tuesday, June 23

10:30-12:00 SESSION 65: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - MAMMALS  
Chair: Jack Sullivan

10:30 692 Phylogeny of the Tenrecidae: Biogeographic Implications.  
*L.E. Olson

10:45 693 Phylogeography of Highland Rodents.  
*J. Sullivan

11:00 694 Higher Level Relationships and Biogeographic History of South American Sigmodontine Rodents: Evidence from mtDNA Sequence Data.  
*M.F. Smith

*A.S. Byun, B.F. Koop, T.E. Reimchen

11:30 696 A Review of Bergmann's Rule in Mammals: Is it Valid?  
*K.G. Ashton, M.R. Tracy

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Room IRC 6  
Tuesday, June 23

10:30-12:00 SESSION 66: SOCIAL BEHAVIOUR/STRUCTURE  
Chair: Allen Moore

10:30 697 Evolutionary Changes in Myxococcus xanthus Social Behavior.  
*G.J. Velicer, L. Kroos, R.E. Lenski

10:45 698 Social Organization in Sperm Whales, Physeter macrocephalus, Inferred from Nuclear and Mitochondrial DNA.  

11:00 699 The Importance of Social Interactions in Evolution: Social Selection and Indirect Genetic Effects.  
*A.J. Moore, J.B. Wolf, E.D. Brodie III

11:15 700 Social Structure Predicts Genetic Structure in a Baboon Hybrid Zone.
11:30  701  Phylegetic Relationships and the Origin of Social Behaviors in the Four Tribes of the Subfamily Polistineae with the Use of Molecular Markers.  
*E. Arevalo, Y. Zhu, D.C. Queller, J.E. Strassmann

*J. Wolf, A.J. Moore, E.D. Brodie III

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<td>Chair: Dianne Gleeson</td>
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| 10:30  703  Effects of Pleistocene Glaciations on Diversification of Montane Grasshoppers in the Rockies.  
*L.L. Knowles, D.J. Futuyma |
| 10:45  704  Factors Affecting the Evolution of Premating Isolation.  
*H.D. Rundle, A.O. Mooers, M.C. Whitlock |
| 11:00  705  Weather You’re Ready or Not: The Effects of Climate on Diapause and the Genetics of Apple and Hawthorn Host Races of *Rhagoletis pomonella*.  
*K.E. Filchak, J.L. Feder, J.B. Roethele |
| 11:15  706  Genetic Evidence for Inversion Polymorphism Differentiating Host Races of the Apple Maggot Fly, *Rhagoletis pomonella*.  
*L.J. Feder, K. Filchak, J.B. Roethele |
| 11:30  707  Pheromone Evolution and Speciation in New Zealand’s Leafroller Moths.  
*D.M. Gleeson, R.D. Newcomb |
| 11:45  708  Convergent Evolution of Courtship Songs among Cryptic Species of the Carnea- Group of Green Lacewings (Neuroptera: Chrysopidae: *Chrysoperla*).  
*C.S. Henry, M.M. Wells |

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<td><strong>SESSION 68: MOLECULAR EVOLUTION/SYSTEMATICS</strong></td>
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*S.C. Sukhdeo, A.D. Bansemir, M.V.K. Sukhdeo |
| 10:45  710  Insights into the Evolution of Nuclear Transport from Phylogenetic Analyses of Karyopherins.  
*L.A. Katz |
| 11:00  711  Rates of Molecular Evolution Differ between African and Neotropical Cichlids.  
*I. Farias, I. Sampaio, A. Meyer, G. Orti |
| 11:15  712  Phylogeny of Parabasalian Symbionts from Lower Termite Hindguts and the Nature of the Ancestral Parabasalian.  
*P.J. Keeling, G.I. McFadden |
| 11:30  713  Molecular Phylogenetic Perspectives on the Possible Paraphyly of Microbats.  
*M.J. Stanhope, V.G. Waddell, E. Teeling |

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10:30-12:00  SESSION 69: COEVOLUTION – PLANT/INSECT INTERACTIONS
Chair: Diana Pilson

10:30 715 Tolerance to Herbivory and Competition in the Common Morning Glory, Ipomoea purpurea. *P. Tiffin

10:45 716 Cost of Glandular Trichomes, a "Resistance" Character in Datura wrightii. *E. Elle, N.M. van Dam, J. Hare


11:15 718 A Positive Association between Oviposition by a Pre-Dispersal Seed Predator and Fruit Set: Female Choice Or Manipulation. *S. Morita, A. Brody

11:30 719 Barley Yellow Dwarf Virus Modification of Host Plant Choice in the Common Green Aphid Schizaphus graminum. *A.D. Stewart, S.E. Kelley

11:45 720 The Effect of Variation in Branching Morphology and Flowering Phenology on Resistance and Tolerance of Herbivory in Wild Sunflower, Helianthus annuus. *D. Pilson

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Room Henn 200
Tuesday, June 23

10:30-12:00  SESSION 70: MATING (BREEDING) SYSTEMS - PLANTS
Chair: Matthew Olson

10:30 721 The Influence of Flower Number and Herkogamy on the Mating System of the Common Morning Glory, Ipomoea purpurea. *S. Chang

10:45 722 Contributions of Autogamy and Geitonogamy to Self-Fertilization in a Mass-Flowering, Clonal Plant. *C.G. Eckert

11:00 723 Gender Modification and the Evolution of Dioecy in Astilbe bibernata. *M.S. Olson

11:15 724 Ecological and Genetic Factors in the Evolution of Autogamy in Arenaria uniflora (Caryophyllaceae). *L. Fishman

11:30 725 Sex Ratio Evolution in Structured Populations of a Gynodioecious Plant. *D.E. McCauley


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Room IRC 4
Tuesday, June 23

10:30-12:00  SESSION 71: HYBRIDIZATION/ECOLOGICAL GENETICS
Chair: Mitch Cruzan

10:30 727 Genetic Interactions and Natural Selection in Louisiana Iris Hybrids. *J.M. Burke, T.J. Voss, M.L. Arnold

10:45 728 Genomic Interactions in Intraspecific Hybrids of Arabidopsis thaliana (Brassicaceae).
11:00  729  Genetic and Evolutionary Aspects of Natural Hybridization between *Orchis laxiflora* and *O. palustris* (Orchidaceae).
*F. Verra, R. Cianchi, P. Arduino, L. Bullini

11:15  730  Geographic Variation and Hybridization in the *Piriqueta caroliniana* Complex.
*M.B. Cruzan

11:30  731  Morphological and Molecular Analyses of the Extent of Hybridization in *Penstemon* (Scrophulariaceae): An Example from an Isolated Population.
*S.L. Datwyler, A.D. Wolfe

11:45  732  Gene Flow between Cultivated and Wild Beets in California?
*D. Bartsch, N. Ellstrand

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**Room IRC 5**
Tuesday, June 23

**SESSION 72: CONSERVATION GENETICS**
Chair: Michael Pfrender

10:30  733  A Role for Inter- or Intra-Specific Hybridization in Determining an Exotic's Invasiveness?
*N.C. Ellstrand, K.A. Schierenbeck

10:45  734  Relationships between Quantitative and Molecular Genetic Variation in Natural Populations.
*M.E. Pfrender, M. Lynch

11:00  735  Genetic Diversity and Gene Flow at a Snail's Pace? The Story of the Iowa Pleistocene Snail.
*T.K. Ross

11:15  736  New DNA Markers Provide Insight to Temporal Change in Hybridization.
*J.D. Baker, P. Bentzen, P. Moran

11:30  737  Genetic Mechanisms Underlying Outbreeding Depression in an Intertidal Copepod.
*S. Edmands

11:45  738  Patterns of Introduction and Dispersal of the Vector of Avian Malaria in Hawaii: Data from Microsatellite and mtDNA Variation.
*D.M. Fonseca, D. LaPointe, R.C. Fleischer

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**Room: Chan Centre**
Tuesday, June 23

**1:30 – 2:30**  
**PRESIDENTIAL ADDRESS**
**SOCIETY FOR THE STUDY OF EVOLUTION**
The Bridge from Micro- to Macroevolution: a Tour of the Construction Site
Stevan J. Arnold

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**Room: IRC 2**
Tuesday, June 23

**SYMPOSIUM 7: YOUNG INVESTIGATORS**
**AMERICAN SOCIETY OF NATURALISTS**

3:00  739  Codon Bias Evolution in *Drosophila*: Detecting the Footprint of Natural Selection at 'Silent' sites in DNA.
*Hiroshi Akashi


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*Rodney Mauricio

4:00 - 4:30 Break

4:30 741 A Molecular Phylogeny of the New World Orioles Icterus: a Framework for Reconstructing the History of Plumage Evolution. *Kevin Omland

5:00 742 Determinants of Sexual Isolation and Mating Success in Drosophila pseudoobscura and D. persimilis. *Mohamed Noor


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Room IRC 4 Tuesday, June 23

2:45-4:00 SESSION 73 - SPECIATION AND CLADOGENESIS
Chair: Harvey Ballard

2:45 745 Origin and Ecological Significance of Polyploidy in Achillea millefolium (Asteraceae). *J.M. Ramsey

3:00 746 Floral Characters and Reproductive Isolation between Interfertile Nicotiana Species. *A. Ippolito, T.P. Holtsford

3:15 747 Insights into Geographic Speciation in the Viola canadensis Complex, Based on Internal Transcribed Spacer DNA Sequences. *H.E. Ballard, Jr., M.D. Devine, K.J. Sytsma

3:30 748 Host-Associated Differentiation in a Recently Generalized Aphid: Prospects for Speciation in Uroleucon ambrosiae. *D.J. Funk

3:45 749 Are Edaphic Factors Influencing Incipient Speciation in Lasthenia californica (Asteraceae)? *N. Rajakaruna

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Room Henn 201 Tuesday, June 23

2:45-4:00 SESSION 74- BIOGEOGRAPHY/GEOGRAPHIC VARIATION - INSECTS
Chair: William Bradshaw

2:45 750 Cancelled

3:00 751 Behavioral and Genetic Differentiation Between Native andIntroduced Populations of the Argentine Ant.. *A.V. Suarez, N.D. Tsutsui, D.A. Holway, T.J. Case

3:15 752 Physiological and Phenological Adaptation to Temperate Climates. *W.E. Bradshaw, C.M. Holzapfel, S. Fujiyama


3:45 754 The Influence of Dispersal and Diet Breadth on Patterns of Genetic Isolation by Distance in Phytophagous Insects. *M.A. Peterson, R.F. Denno

62
2:45-3:45  
**SESSION 75: BIOGEOGRAPHY/GEOGRAPHIC VARIATION - MAMMALS**  
Chair: Anne Yoder  
2:45  755  Using Microsatellite Loci to Investigate the Evolutionary History and Behavioural Ecology of Migratory Species: Dealing with Uncertainty About Mutation Models.  
*G.M. O'Corry-Crowe, M. DeAngelis, A.E. Dizon*  
3:00  756  Molecular Zoogeography of the Red Sea Region with a Focus on the Hamadryas Baboon.  
*D.E. Wildman, A. Al-Aghbari, T.R. Disotell, C.J. Jolly*  
3:15  757  DNA Sequences from Extinct Giant Lemurs: Consequences for Biogeographic and Phylogenetic Hypotheses of the Extant.  
*A.D. Yoder, T.J. Parsons*  
3:30  758  Preliminary Results on the Population Genetics of Central American Howler Monkeys.  
*J.A. Ellsworth, G.A. Hoelzer*

2:45-4:00  
**SESSION 76: ADAPTATION - LIFE HISTORY**  
Chair: Jeff Leips  
2:45  759  Larval Nutrition and Early Juvenile Performance: Field Studies with Barnacles.  
*R.B. Emlet*  
*J.B. Johnson*  
*J.W. Leips, J. Travis*  
3:30  762  Tests of the Adaptive Menopause Hypothesis with East African Lions and Baboons.  
*M. Tatar, C. Packer*  
3:45  763  Evolution of Correlated Germination and Post-Germination Traits: A Two-Locus Model.  
*G.A. Fox, A.S. Evans*

2:45-4:00  
**SESSION 77: CONSERVATION GENETICS - FISH**  
Chair: Craig Stockwell  
2:45  764  Salinity and Pgdh in an Endangered Species, the White Sands Pupfish (*Cyprinodon tularosa*).  
*C.A. Stockwell, M. Mulvey*  
3:00  765  The Relationship between Genetic Diversity and Fitness in Pacific Salmon.  
*D.D. Heath, J. Kelly*  
*P. Spruell, B.E. Rieman, K.L. Knudsen, F.W. Allendorf*  
*S.J. McKay, S. Pollard, B.F. Koop*
Correlation between Extent of Reproductive Isolation and Phenotypic Divergence in Sympatric Lake Whitefish (*Coregonus sp.*) as Revealed by Microsatellite and Morphological Analyses.

*G. Lu, L. Bernatchez, A. Chouinard

**SESSION 78: PHENOTYPIC PLASTICITY - PLANTS**

2:45  769  Adaptiveness of Phenotypic Plasticity in *Aster.*

*G.A. Allen

3:00  770  Effects of Phytochrome-Mediated Neighbour Perception on Phenotypic Selection of Seedling Traits in High and Low Densities.

*S.A. Dudley, J.D. Sleeman, A. Fast

3:15  771  Phenotypic Plasticity among Families of *Danthonia spicata* with Different Dispersal Capabilities.

*M.K. McCormick, K.L. Gross

3:30  772  Plasticity in Gas Exchange and Morphological Traits in Response to Light Quality in the Androdiocious Species *Mercurialis annua.*

*J.D. Sleeman, J.R. Pannell, S.A. Dudley, S.C.H. Barrett


*B.B. Black

**SESSION 79: MORPHOMETRICS**

2:45  774  Morphological and Morphometric Approaches to Species Identification in a Sea Star (*Leptasterias*) Cryptic Species Complex.

*A.W. Hrincevich, D.W. Foltz, J.M. Flowers

3:00  775  Geometric Morphometrics Simplified - the Essentials.

*F.J. Rohlf

3:15  776  More Than Size and Shape: A New Look at Growth and Ontogeny.

*P.M. Magwene

3:30  777  A Morphometric Analysis of the Ontogeny of Skull Ossification in Pipoid Frogs.

*J. Yeh

3:45  778  Diversity of Skull Shapes in Terrestrial Squirrels (*Marmotini, Sciuridae*).

*D.L. Swiderski

**SESSION 80: POPULATION/ECOLOGICAL GENETICS - FISH**

2:45  779  Microsatellites Discriminating Species and Stocks of Neotropical Fish.

*F.M.C. Fernandes-Matioli, L.F. Almeida-Toledo, S.A. Toledo-Filho

3:00  780  Population Structure of British Columbia Coho Salmon Based on Microsatellite Markers.

*M.P. Small
3:15 781 Low-Predation, High-Predation Guppy (*Poecilia reticulata*) Populations; a Microsatellite-Based Genetic Perspective.  
*J.S. Taylor, F. Breden*

3:30 782 Cancelled

3:45 783 Using Microsatellites to Test for Single vs Double Invasion in Sympatric Whitefish (*Coregonus*) Ecotypes.  
*L. Bernatchez*

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Room Henn 200  
Tuesday, June 23

2:45-4:00 SESSION 81: MOLECULAR EVOLUTION  
Chair: Lisa Vawter

2:45 784 Phylogenetic Analysis of the Olfactory Receptor Gene Family.  
*L. Vawter*

3:00 785 Evolutionary Dynamics of Transposable Elements in Self-Fertilizing Species.  
*M.T. Morgan*

3:15 786 Analysis of Young LINE-1 Elements After Isolation by PCR Amplification and Screening for ORF’s.  
*M.A. Cantrell, H.A. Wichman*

3:30 787 Extinction of the LINE-1 Transposable Element Family in the Oryzomyini Tribe.  
*R.A. Grahn, N.C. Casavant, H.A. Wichman*

3:45 788 Orthologous Mys Retrotransposons in Two Species of *Peromyscus* Evolve at Different Rates.  
*L. Scott, R.R. Sawby, C.J. Brown, H.A. Wichman*

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Room IRC 3  
Tuesday, June 23

4:30-6:00 SESSION 82: PHENOTYPIC PLASTICITY - ANIMALS  
Chair: Lin Schwarzkopf

4:30 789 Life History Changes in Malaria Parasites Following Intervention Strategies.  
*A.G.J. Buckling, A.F. Read*

4:45 790 Geographic Variation in the Effect of Embryonic Environment on Offspring Growth Rates.  
*L. Schwarzkopf*

5:00 791 Different Mechanisms Underly Phenotypic Plasticity and Interspecific Variation for a Reproductive Character in Drosophilids.  
*J. Hodin, L.M. Riddiford*

5:15 792 Phenotypically Plastic Feeding Morphologies in Marine Herbivorous Snails - are they Adaptive?  
*D.K. Padilla*

5:30 793 Effects of Parasites on Gastropod Shell Size and Shape.  
*A.C. Krist*

5:45 794 The Reaction Norms in Isolated Populations of Wolf Spider *Hygrolycosa rubrofasciata*.  
*L.T. Vertainen*

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Room IRC 4  
Tuesday, June 23

4:30-6:00 SESSION 83: MATING (BREEDING) SYSTEMS - PLANTS  
Chair: Paula Kover
4:30 795  Does Outcrossing Reduce Progeny Susceptibility to Pathogens?
*P.X. Kover .

4:45 796  The Maintenance of Stigma-Height Polymorphisms in Narcissus (Amaryllidaceae).
*A.M. Baker, J.D. Thompson, S.C.H. Barrett

5:00 797  The Influence of Population Size and Flower Traits on Fitness of Rudbeckia hirta.
*C.M. Olson, D.L. Byers

5:15 798  The Intensity of Post-Pollination Selection Revealed by Complete Paternity Assignment Using AFLP.
*S.L. Krauss

5:30 799  Geographical Variation in Sexual Polymorphism in Narcissus triandrus (Amaryllidaceae).

5:45 800  Inbreeding, Deleterious Genes and the Evolution of Complex Hybridity in Isotoma petraea (Lobiaceae).
*J.D. Bussell, S.H. James

Room IRC 1  
Tuesday, June 23

4:30-6:00  SESSION 84: DEVELOPMENTAL EVOLUTIONARY BIOLOGY
Chair: David Stern

4:30 801  Evolution by Small Steps with Big Genes: Ultrabithorax and Morphological Differences between Drosophila Species.
*D.L. Stern

4:45 802  Inferring Developmental Rules from Morphometric Variation and Asymmetry.
*C.P. Klingenberg

5:00 803  Characterization of the Mechanism of Parthenogenesis in a Cockroach with Alternate Modes of Development.
*L.S. Corley, A.J. Moore

5:15 804  Evolutionary Aspects of Insect Muscle Physiology.
*M.R. Wolf, G.H. Fitzhugh, J.H. Marden

*H. Sun, X. Gu, D. Dickinson, W.-H. Li

5:45 806  Concerted Evolution in the Egg Receptor for the Rapidly Evolving Abalone Sperm Protein Lysin.
*W.J. Swanson, V.D. Vacquier

Room Henn 202
Tuesday, June 23

4:30-6:00  SESSION 85: HYBRIDIZATION/ECOLOGICAL GENETICS
Chair: Simon Goodman

4:30 807  Using ISSR Markers in Studies of Natural Populations.
*A.D. Wolfe, Q. Xiang, S.R. Kephart

4:45 808  Genetic Introgression Through Rare Hybridization: A Study of Red and Sika Deer (Genus Cervus) in South-West Scotland.
*S.J. Goodman, N.H. Barton, G. Swanson, J.M. Pemberton

5:00 809  Interspecific Genetics of AFLP Variation and Song Behaviors in the Hawaiian Cricket Genus Laupala.
*K.L. Shaw, Y.M. Parsons

5:15 810 Non-coalescence of Mitochondrial Haplotypes within Manacus (Aves) Species: Hybridization or Incomplete Lineage Sorting.
*R.T. Brumfield, M.J. Braun

5:30 811 Ecological Selection and the Likelihood of Hybrid Speciation.
*C.A. Buerkle, L.H. Rieseberg

5:45 812 Reticulate Evolution Under the Pure Drift Model.
*S. Xu, W. R. Atchley

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Room Hebb Th
Tuesday, June 23
4:30-6:00 SESSION 86: POPULATION/ECOLOGICAL GENETICS
Chair: Brian Charlesworth

4:30 813 Effects of Population Subdivision, Background Selection, Balancing Selection and Local Selection on Patterns of Genetic Diversity.
*B. Charlesworth, M. Nordborg, D. Charlesworth

4:45 814 The Response of a Gastropod Population to Microgeographic Selection Gradients Caused by a Predator is Constrained by Migration.
*E.G. Boulding

5:00 815 Genetics of Sex-Ratio Distortion in Drosophila simulans/D. sechellia Introgression Lines.
*E.T. Dermitzakis, J.P. Masly, A.G. Clark

5:15 816 Sex Chromosome - Cytoplasm Fitness Interactions and Sex-Specific Fitneses of mtDNA in Drosophila.
*D.M. Rand

5:30 817 Intragenomic Variation of ITS2 of Ribosomal DNA Varies among Populations of Anopheles nuneztovari.
*D.Y. Onyabe, J. Conn

5:45 818 Comparison of Genetic Differentiation in a Pair of Generalist and Specialist Sister Species.
*S.T. Kelley, B.D. Farrell, J.B. Mitton

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Room IRC 5
Tuesday, June 23
4:30-6:00 SESSION 87: QUANTITATIVE GENETICS
Chair: Susan Mazer

4:30 819 Inbreeding and Predictions of Selection Response in Nemophila menziesii.
*D.L. Byers, R.G. Shaw, F.H. Shaw

4:45 820 Size-Dependent Sex Expression in Clarkia unguiculata: Changes within and Across Genotypes.
*S.J. Mazer

5:00 821 Accumulation of Spontaneous Mutations in Arabidopsis thaliana.
*R.G. Shaw, D.L. Byers

5:15 822 Mutation Accumulation in C. elegans.
*L. Vassilieva, M. Lynch

5:30 823 Estimating the Genomic Mutation Rate in a Drosophila Population Under Relaxed Selection.
*L. Yampolskyl, S. Shabalina, A. Kondrashov

5:45 824 Effects of Temperature on Properties of Spontaneous Deleterious Mutation.

67
**SESSION 88: MOLECULAR EVOLUTION/POPULATION GENETICS**

**Chair:** Michael Purugganan

4:30 825 Excess Intraspecific Replacement Polymorphisms at *Arabidopsis thaliana* Genes: A Look at Flower Development Loci.  
*M.D. Purugganan, J.I. Suddith*

4:45 826 Evolutionary Analysis of Adh and Adhr in African and Worldwide Populations of *Drosophila melanogaster*.  
*S. Tsaur, M.E. Kreitman*

5:00 827 Evolution of Pheromone Binding Proteins in Moths.  
*C.S. Willett*

5:15 828 Let There Be Light: Click Beetle Luciferase and Bioluminescence as a Model for Molecular and Phenotypic Evolution.  
*U. Stolz, J. Feder, K. Filchak, K. Wood*

5:30 829 Molecular Insights into Colony and Population Structure of the Multiple Queened Ant *Polyrhachis doddi*.  
*R.N. Johnson, R.H. Crozier*

5:45 830 Intron Polymorphism and Concerted Evolution between EF1a Loci in Shrimp.  
*S. Lavery, S. Palumbi*

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**SESSION 89: MOLECULAR EVOLUTION/SYSTEMATICS**

**Chair:** Richard Broughton

4:30 831 A Test of “Male Driven Evolution” in Birds - Do Males Do it Faster?  
*N.W. Kahn, T.W. Quinn*

4:45 832 Molecular Evolution in Ratite Birds.  
*O.P. Haddrath, A.J. Baker*

5:00 833 Origin and Molecular Evolution of the Can Sine.  
*M.A. Nedbal, J.J. Flynn*

5:15 834 A Comparison of Different Genes and Data Partitions in Higher Level Mammalian Phylogenetics.  
*H.M. Amrine, A. Burk, M.J. Stanhope, M.S. Springer*

5:30 835 Phylogenetic Relationships in Seed Plants Based on Sequences of Highly Conserved Chloroplast Genes.  
*M.J. Sanderson, M.F. Wojciechowski, J. Hu*

5:45 836 The Relationship between Homoplasy and Divergence in Vertebrate Mitochondrial DNA Sequences.  
*R.E. Broughton, S.E. Stanley*

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**SESSION 90: CONSERVATION GENETICS - THEORY AND METHODOLOGY**

68
Chair: Ellen Williamson

4:30  837  Maximum Likelihood Estimator of Variance Effective Population Size.  
   *E.G. Williamson, M. Slatkin

4:45  838  A Bias Adjustment for a Common Sampling Artifact in Studies of Population Genetic  
   Differentiation.  
   *R.S. Waples

5:00  839  Predicting Nuclear Gene Monophyly from Mitochondrial Data: The 3X Rule.  
   *M.P. Hare, F. Cipriano, S.R. Palumbi

5:15  840  Effectiveness of Effective Population Size Estimators.  
   *B.J. Swanson, J.A. Curtis, P.M. Waser

5:30  841  Are Microsatellite Loci Really Neutral Genetic Markers?  
   *S.A. Karl, T. Strelman

5:45  842  Mechanisms of Metapopulation Evolution in Fragmented Populations Undergoing Extinction and  
   Recolonization.  
   *A.M. McMillan

WEDNESDAY, JUNE 24

#-room-0000

8:30 – 12:30  Note: The symposium, Character Evaluation and Phylogenetic Analysis, (contribution numbers  
843 to 849) has been rescheduled on Monday afternoon.

#-room-0000

8:15-10:00  SESSION 91: QUANTITATIVE GENETICS

8:15  850  Fluctuating Asymmetry in Pacific Salmon: Heritability and Fitness Consequences.  
   *C.A. Bryden, D.D. Heath

8:30  851  Conditions for Positive and Negative Correlations between Fitness and Heterozygosity.  
   *H. Deng, Y.-X. Fu

8:45  852  Quantitative Genetics of Daphnia pulicaria.  
   *K.K. Morgan, M. Lynch

9:00  853  Variation in Genetic Architecture of Calling Song in Crickets: Drift Or Selection?  
   *D.A. Roff, T.A. Mousseau, D.J. Howard

9:15  854  Changes in Genetic and Environmental Variance with Inbreeding in Drosophila.  
   *M.C. Whitlock, K. Fowler

9:30  855  Genetic Variation in Ovarirole Number on a Microenvironmental Scale in Drosophila  
   melanogaster from "Evolution Canyon", Israel.  
   *M.L. Wayne, A. Korol, E.N. Nevo, T.F.C. Mackay

9:45  856  The Genetics of Insect Resistance in Arabidopsis thaliana.  
   *B.M. Barker, T. Mitchell-Olds

#-room-0000

8:15-10:00  SESSION 92: ADAPTATION - BEHAVIOUR

69
Chair: Jordan West

8:15  857  Selective Consequences of Spiteful Behavior by an Avian Brood Parasite.
       *J.N.M. Smith, M.J. Taitt

8:30  858  The Evolution of Locomotion in Pinnipeds - a Phylogenetic Perspective.
       *P.J. Adam, A. Berta

8:45  859  Conflict Avoidance and Increased Shared Interest in a Community of Larval Parasites from Sand Crabs.
       *K.D. Lafferty

9:00  860  The Influence of Stigma Closure on Pollinator Foraging Behavior in *Mimulus aurantiacus*.
       *A.E. Fetscher

9:15  861  Evolution of Group Signatures in Bats.
       *J.W. Boughman

9:30  862  Opportunity for Selection on Antipredator Response Traits of Larval Salamanders (Eurycea).
       *S.M. Welter

9:45  863  Rare Predators Exploit Prey Antipredatory Responses - Adaptations to Flush-Pursue Foraging in Insectivorous Birds.
       *P.G. Jablonski

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**Room IRC 3**

**Wednesday, June 24**

8:15-10:00  **SESSION 93: EVOLUTION OF SEX AND RECOMBINATION**

Chair: David Gutman

8:15  864  Sex and the Evolution of Intrahost Competition in RNA Viruses.
       *P.E. Turner, L. Chao

8:30  865  High Levels of Genetic Variation in a Population of an Asexual Mycorrhizal Fungus
         *Acaulospora collosica*.
       *A. Pringle, R. Vilgalys, J.-M. Moncalvo

8:45  866  An X-Linked Gene with a Degenerate Y-Linked Homologue in the Dioecious Plant *Silene latifolia*.
       *D.S. Gutman, D. Charlesworth

9:00  867  The Role of Habitat in Structuring Mixed Populations of Sexual and Clonal *Potamopyrgus antipodarum*.
       *S. Negovetic, J.W. Jokela

       *S.L. Ball

9:30  869  Temperature Dependent Sex Determination in the Giant River Turtle *Podocnemis expansa*.
       *N. Valenzuela C.

9:45  870  Sex Ratio Bias and the Evolution of a Neo-Y Chromosome in *Musca domestica*.
       *M.E. Clark, E.H. Bryant

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**Room IRC 1**

**Wednesday, June 24**

8:15-10:00  **SESSION 94: MEASURING SELECTION IN THE WILD**

Chair: Subodh Jain
8:15  871  Role of Gynodioecy and Life History Variation in the Colonizing Success of *Trifolium hirtum*.  
*S.K. Jain*

8:30  872  Natural Selection on Photosynthetic Genotypes of *Amaranthus hybridus* in Experimental Populations.  
*A.M. Arntz, E.H. DeLucia, N. Jordan*

8:45  873  Variation between Seasonal Cohorts of Offspring in a Desert Annual Plant.  
*G. LeBuhn*

9:00  874  Variable Selection by Herbivores Over an Elevational Gradient for *Solidago macrophylla* (Asteraceae).  
*C. Kelly*

9:15  875  Evolution of a Disease Resistance Gene in *Arabidopsis thaliana*.  
*R. Mauricio*

9:30  876  Natural Selection on Thermal Performance Curves of Caterpillar Feeding.  
*J.G. Kingsolver*

9:45  877  Life and Death Above 8000 Meters: Natural Selection on High-Altitude Mountain Climbers.  
*R.B. Huey*

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**Room Henn 200**  
Wednesday, June 24

**SESSION 95: POPULATION/ECOLOGICAL GENETICS**  
Chair: Micheal Hickerson

8:15  878  Patterns of Non-random Mating in a Sessile Marine Invertebrate, the Caribbean Octocoral, *Briaritum asbestunum*.  
*A. D. Brazeau*

8:30  879  Genetic Differentiation in Marine Environments: A Test of Four Hypotheses Using mtDNA in Blenniid Fishes.  
*C. Riggins, M.W. Nachman*

8:45  880  Among-Locus Variance in F-Statistics: Results of a Meta-Analysis.  
*C.F. Baer*

9:00  881  Gene Flow and Phylogeography of the Northern Clingfish (*Gobius ox maedricus*) as Inferred from mtDNA Analysis.  
*M.J. Hickerson, J.R.P. Ross*

*M. Waycott, P. Barnes, G. Inglis*

*D.W. Schwilk*

9:45  884  Cancelled

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**Room IRC 5**  
Wednesday, June 24

**SESSION 96: COEVOLUTION – PLANTS, POLLINATORS AND PATHOGENS**  
Chair: Aaron Liston

8:15  885  Floral Resource Predictability in Depauperate Floras and Pollen Specialization in Desert Solitary Bees.

71
8:30 886  Leaf Shape and its Influence on Pathogen Resistance in the Ivyleaf Morning Glory.
*K. L. Bright

8:45 887  Coevolution of a Plant Host - Pathogen Gene-For-Gene System in a Metapopulation Model without Cost of Resistance Or Cost of Virulence.
*C. Damgaard

9:00 888  The Importance of Spatial and Temporal Variability in Multiple Species Interactions.
*A.K. Brody


9:30 890  Fly Speciation in a Globeflower. Who Came First: The Parasite or the Mutualist?
*L. Despres, N. Jaeger

9:45 891  Do Co-Flowering Species Influence Pollinator-Mediated Selection on Plant Traits?: Tests Using Ipomopsis aggregata.
*C.M. Caruso

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Room IRC 4
Wednesday, June 24

8:15-10:00  SESSION 97: SEXUAL SELECTION
Chair: Goran Arnegist

8:15 892  Effects of Variation in Parental Investment on Male and Female Mating Discrimination in the Striped Ground Cricket, Alonembius socius.
*J.A. Sadowski, A.J. Moore

8:30 893  Adaptive Significance of Mate Choice in the Ground Cricket.
*K.M. Fedorka, C. Roberts, T.A. Mousseau

8:45 894  Female Preference and Male Trait: Heritability and Genetic Correlation in a Field Cricket.
*D.A. Gray, W.H. Cade

9:00 895  Comparative Evidence for the Evolution of Genitalia by Sexual Selection.
*G. Arnegist

9:15 896  Sexual Conflict Drives Morphological Divergence with Functional Convergence.
*L. Rowe

9:30 897  Heritability and Sexual Selection via Female Choice in a Moth (Utetheisa ornatrix).
*V.K. Iyengar, T. Eisner

9:45 898  Molecular Mate Choice and Gamete Recognition Polymorphisms in Sea Urchins.
*S. Palumbi

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Room Henn 202
Wednesday, June 24

8:30-10:00  SESSION 98: SELECTION EXPERIMENTS
Chair: Veronique Delesalle

8:30 899  Fitness Costs and Trade-Offs Associated with Intra-Population Asexual Diapause Variation in the Rotifer Synchaeta pectinata.
*S.C. Fradkin

8:45 900  Nesting Behavior Responds to Selection for Increased Voluntary Activity in House Mice.

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9:00  901  Genetic Responses of Life-History Traits to Size-Dependent Predation in Physa acuta (Gastropoda).
       *A. Monsutti, N. Perrin
9:15  902  Phenotypic and Evolutionary Responses to Environmental Stresses in a Ruderal Plant, Sinapis arvensis (Brassicaceae).
       *M.L. Stanton, B.A. Roy, D.A. Thiede
9:30  904  Responses to Selection on Gender in Spergularia marina (Caryophyllaceae): The Accessory Traits.
       *V.A. Delesalle, S.J. Mazer, P.R. Neal
9:45  905  Ancestral Polymorphisms in Phylogenetic Reconstruction: A Laboratory Study.
       *M.E. White, B.I. Crother

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Room Hebb Th
Wednesday, June 24
8:15-10:00  SESSION 99: MOLECULAR EVOLUTION
Chair: Paul Rawson
8:15  906  Evolution of V4 and V7 Expansion Segments in the 18S Genes of Cladoceran Crustaceans.
       *T.J. Crease, D.J. Taylor
8:30  907  Molecular Evolution of the X-Linked Color Vision Genes in New World Monkeys.
       *Y. Tan, S. Boissinot, W.-H. Li
8:45  908  Evolution of Nest-Building Behavior in Cornitermes bequaerti (Isoptera: Termitidae).
       V. Martins, V. Gavrilovic, *J.J. Smith
9:00  909  Intergenomic Coadaptation in Tigrioniops californicus: Parallel Divergence in the Mitochondrial
       Subunits of Cytochrome Oxidase and its Nuclear Encoded Substrate Cytochrome c.
       *P.D. Rawson, R.S. Burton
9:15  910  Mutational and Selective Forces Controlling Polyaminoacid Tract Abundances in Eukaryotic
       Proteins.
       *D. Field
9:30  911  One Gene, One Lineage...Two Histories of Editing? Evolution of RNA Editing in Myxomycetes.
       *T.L. Horton, L.F. Landweber
9:45  912  New Data on Bindin: Possible Implications for the Evolution of Reproductive Isolation in
       Echinometra.
       *L.B. Geyer, S.R. Palumbi

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Room IRC 1
Wednesday, June 24
10:30-12:30  SESSION 100: EVOLUTION OF SEX AND RECOMBINATION
Chair: Nick Barton
10:30  913  Do Parasites Reproduce Sexually to Evade Host Immune Responses?
       *K.A. Lythgoe
10:45  914  Random Drift and the Evolution of Recombination.
       *N.H. Barton, S.P. Otto
11:00  915  A Theoretical Study of the Evolution of Mutation Rate in Sexual Organisms.
       *T. Johnson
11:15  916  Testing for Epistasis between Deleterious Mutations.
11:30  917  An Embarrassment of Riches: The Stochastic Generation of Beneficial Mutations.
      *D. Gessler

11:45  918  Synthetic Lethals: Two-Locus Mutation-Selection Balance.
      *P.C. Phillips, N.A. Johnson

Presentations 919 – 926 have been moved to Monday, 2:45 – 4:45.

Room IRC 5
Wednesday, June 24
10:30-12:30  SESSION 101: SPECIES INTERACTIONS
Chair: Michele Nishiguchi

10:30  927  Geographic Variation of Algal Symbiont Genotypes in Tropical Octocorals.
      *T.L. Goulet, M.A. Coffroth

10:45  928  Promiscuity in the Crypts: Partner Swapping between Bobtail Squid and their Luminous Symbionts.
      *M.K. Nishiguchi

11:00  929  Mycorrhizal Innovation and Specialization in a Non-Photosynthetic Orchid Genus.
      *D.L. Taylor, T.D. Bruns, S.A. Hodges

11:15  930  Genetics of Protective Alkaloid Expression in Grass-Fungal Endophyte Mutualisms.
      *H.H. Wilkinson, A.C. Mallory, J.D. Blankenship, C.L. Schardl

11:30  931  Dynamics of Cytoplasmic Incompatibility in Subdivided Populations.
      *R. Haygood

11:45  932  Speciation and Heritable Microbes: The Evolution and Consequences of Wolbachia.
      *S.R. Bordenstein, J.H. Werren

12:00  933  The Role of Wolbachia in the Evolution of Reproductive Isolation between Drosophila recens
      and D. subquinaria.
      *D. Shoemaker, V. Katju, J. Jaenike

12:15  934  Patterns of Reproductive Isolation between Two Haplodiploid Species: Nasonia vitripennis and
      N. longicornis.
      *M.D. Drapeau, S.R. Bordenstein, J.H. Werren

Room Henn 201
Wednesday, June 24
10:30-12:30  SESSION 102: ADAPTATION - LIFE HISTORY
Chair: Renate Wesselingh

10:30  935  Threshold Size for Flowering: Variation, Heritability, and Selection.
      *R.A. Wesselingh, T.J. de Jong, P.G.L. Klinkhamer

10:45  936  Evolutionary Differentiation in Sexuality and Life History in a Polyploid Agamic Complex,
      Antennaria parlinii (Asteraceae).
      *L.M. O'Connell, C.G. Eckert

11:00  937  Evolution of Parental Care in Oysters.
      *D.M. O'Foighil, D.J. Taylor

11:15  938  Costs of Predator Avoidance and Environmental Stress in Snails.
11:30 939  Linking Herbivory and Pollination: Correlated Responses in Floral Characters and Pollination after Selection for Resistance to Herbivores.
*S.Y. Strauss, D. Siemens, T. Mitchell-Olds

11:45 940  Gender-Specific Clonal Reproduction in the Brittle Star Ophiactis savignyi.
*T. McGovern

12:00 941  Maternal Effects-Mediated Local Adaptation: Insights from Reciprocal Transplants of Population Hybrids.
*J. Bernardo, S.J. Arnold

12:15 942  Midlife Crises and Life History: Sudden Decrease in Offspring Quality of Middle-Aged House Flies.
*G.S. McIntyre, R.H. Gooding

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Room Henn 202
Wednesday, June 24

10:30-12:30  SESSION 103: SEXUAL SELECTION
Chair: Mark Blows

10:30 943  Sexual Selection and Evolution of Genetic Variation in Stalk-Eyed Flies.
*G.S. Wilkinson, M. Taper

10:45 944  X Chromosome Influences the Sexually-Selected Trait Eyespan in the Stalk-Eyed Fly, Cytodiopsis dalmanni.
*L.L. Wolfenbarger, G.S. Wilkinson

11:00 945  Long-Term Evolution of Mate Recognition After Hybridization between Two Drosophila Species.
*M. Blows

11:15 946  Cancelled

11:30 947  Call Duration Indicates Genetic Quality in Male Gray Treefrogs: Implications for the Evolution of Female Choice.
*A.M. Welch, R.D. Semlitsch, H.C. Gerhardt

11:45 948  Mate Choice for Offspring Performance in a Spider- Major Benefits Or Minor Costs?
*S. Parri, R.V. Alatalo, J. Kotiaho J. Mappes

12:00 949  Phylogenetic Analyses of Courtship-Related Character Evolution in a Jumping Spider Genus (Habronattus).
*M.C. Hedin, W.P. Maddison

12:15 950  Sensory Bias Drives Chorus Structure in a Frog and Katydid.
*A. Snedden

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Room IRC 6
Wednesday, June 24

10:30-12:30  SESSION 104: ECOLOGICAL GENETICS
Chair: Durrell Kapan

10:30 951  The Signature of Selection in Mimicry: Genetic and Phenotypic Correlations in Polymorphic Heliconius Butterflies.
*D.D. Kapan

10:45 952  The Interplay of Environmental and Genetic Factors in the Differentiation of Platystemon californicus Populations.

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<th>Time</th>
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<th>Session Title</th>
<th>Chair</th>
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<tr>
<td>11:00</td>
<td>953</td>
<td>Genetics of Sex Ratio Variation among Local Populations of a Dioecious Plant.</td>
<td>*D.R. Taylor</td>
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<tr>
<td>11:15</td>
<td>954</td>
<td>Microsatellite DNA Variation among Darwin's Finches.</td>
<td>*K. Petren, B.R. Grant, P.R. Grant</td>
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<tr>
<td>11:30</td>
<td>955</td>
<td>DNA Sequence Data and the Discovery of Ecological Diversity in Viruses and Plasmids.</td>
<td>*I. Mitrica</td>
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Room Henn 200
Wednesday, June 24

**SESSION 105: VIRAL EVOLUTION**
Chair: Holly Wichman

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<tr>
<td>10:30</td>
<td>957</td>
<td>Host Range Expansion in Bacteriophage: Interaction Patterns in Nature Can Predict the Results of Evolution in the Laboratory.</td>
<td>*G.P. Krukonis, F.M. Cohan</td>
</tr>
<tr>
<td>10:45</td>
<td>958</td>
<td>Surveying the Adaptive Landscape in an RNA Virus.</td>
<td>*C.L. Burch, L. Chao</td>
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<tr>
<td>11:00</td>
<td>959</td>
<td>Experimental Adaptation of a Virus: Temporal Pattern of Substitutions.</td>
<td>*J. Bull, H.A. Wichman, M. Badgett, L. Scott</td>
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<tr>
<td>11:15</td>
<td>960</td>
<td>Serial Evolution of Multiple Resistance.</td>
<td>*M.J. Brauer</td>
</tr>
<tr>
<td>11:30</td>
<td>961</td>
<td>Molecular Basis and Dynamics of Viral Adaptation to Novel Hosts.</td>
<td>*W.D. Crill, J.J. Bull, H.A. Wickman</td>
</tr>
<tr>
<td>11:45</td>
<td>962</td>
<td>Experimental Adaptation of a Virus: Molecular Mechanisms.</td>
<td>*H. Wichman, J.J. Bull, M. Badgett, L. Scott</td>
</tr>
<tr>
<td>12:00</td>
<td>963</td>
<td>Genotype-Phenotype Dynamics in a Virus Evolving Under Selection.</td>
<td>*M. Rain, H.A. Wichman</td>
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Room IRC 4
Wednesday, June 24

**SESSION 106: QUANTITATIVE GENETICS OF LIFE HISTORY VARIATION**
Chair: Jamie Smith

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<td>10:30</td>
<td>965</td>
<td>Endocrine Genetics of Life History Variation in the Wing-Polymorphic Cricket, <em>Gryllus firmus</em>.</td>
<td>*A.J. Zera</td>
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<tr>
<td>11:00</td>
<td>967</td>
<td>Genetics of Inbreeding Load in <em>Mimulus</em>.</td>
<td>*J. H. Willis</td>
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11:30 969  Quantitative Genetics of Metamorphosis: Can Larval and Adult Forms Evolve Independently?  
     *J.M. West

11:45 970  Genetic Basis of the Trade-Off between Offspring Number and Quality: Experiments in the Bank Vole.  
     *E. Koskela, T. Mappes

12:00 971  Cancelled

Room Hebb Th  
Wednesday, June 24

10:30-12:30  SESSION 107: MOLECULAR EVOLUTION - MICROSLATELLITES
Chair: Guillermo Orti

10:30 972  Microsatellite Evolution in the Polistinae Subfamily of Wasps.  
     *Y. Zhu, D.C. Queller, J.E. Strassmann

10:45 973  Phylogenetic Distribution of Microsatellite Length Variation within and between Species.  
     *G. Orti, I. Farias

11:00 974  Allelic Homoplasy in Tumor Necrosis Factor Microsatellite.  
     *K.D. Makova, R.J. Baker

11:15 975  Microsatellite Variation in Daphnia pulex and pulecrica of Western Oregon.  
     *J. Hicks, M. Lynch

11:30 976  Assessing the Utility of Microsatellite Data in Phylogenetic Studies of Closely Related Species.  
     *C.M. Durando, R. DeSalle, W.J. Eiges, M. Wasserman

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Vancouver Restaurants

Numbers in parentheses are bus routes.
- Take #4 to head downtown via 4th Avenue.
- Take #10 to head downtown via 10th/Broadway.
- Take #9 (or transfer from #10 to #9) to get to area E

1 mile

Area A

- **UBC Village** 5700 block of University Blvd. Restaurants: McDonald's, Spaghetti-Spaghetti, Benny's Bagels, Village Chinese Restaurant, Second Cup Coffee, International Food Fair (matt food), UBC Campus Pizza. Red Leaf Cantonese. Recommended: Benny's Bagels for breakfast, lunch or coffee. $

0.25 miles (5 minute walk)

Area B

- **UBC Golf Club** 224-7799. 5165 University Blvd. Lunch from 11:30-1:30 (M-F) and Sunday brunch. $$

1 mile (15 minute walk)

Area C

- Many good restaurants between 4300-4600 W 10th. Particularly good are:
  - **Chinese Impression Szechuan** 228-0039, 4544 W 10th. Nice Szechuan dishes, lots of room. $$
  - **Raku Kushiyaki** 222-6186, 4422 W 10th. Tasty and unusual Japanese dishes. $$$$

1.75 miles (35 minute walk)

Area D

- Many good restaurants between 2800-3100 W Broadway. Particularly good are:
  - **Caihouns** 737-7062, 3035 W Broadway. Cafe with several cheap dinner options. $
  - **Tokyo Joe's** 739-4791, 2825 W Broadway. Hard to beat for cheap Japanese food. $
  - **Lumière** 739-8185, 2551 (#8) W Broadway. Inventive French. $$$$
  - **Quattro** 734-4444, 2611 4th. Excellent Italian. $$$

3 miles

Area E

- **VIJ** 736-6664, 1453 W Broadway. Innovative Indian restaurant with a Pacific Northwest influence. Amazing! Line up early, reservations aren't accepted. $$$

6-10 miles (on Broadway)

- **Raga restaurant** 733-1127, 1177 W Broadway. Delicious Indian food, especially the tandori. $$

- **Bamboo Leaf Malaysian** 731-8333, 1016 W. Broadway. Cozy place with delicious, authentic Malaysian food. $$

- **Wimaan Thai** 730-9963, 1063 W Broadway. Delicious Thai food, with great service. The food ranges from mild to hot. $$


6-10 miles (Downtown)

- **Delilah's** 687-3424, 1739 Comox (downtown near Denman). Hip restaurant with innovative set menus at $12 or $35 and killer martinis (go early on Friday or Saturday). $$$


- **Canniery Seafood** 254-9600, 1938 W 4th. Delicious vegetarian curries and thalis. $$

5 miles

(More bus and restaurant information will be available at the reception desk.)
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