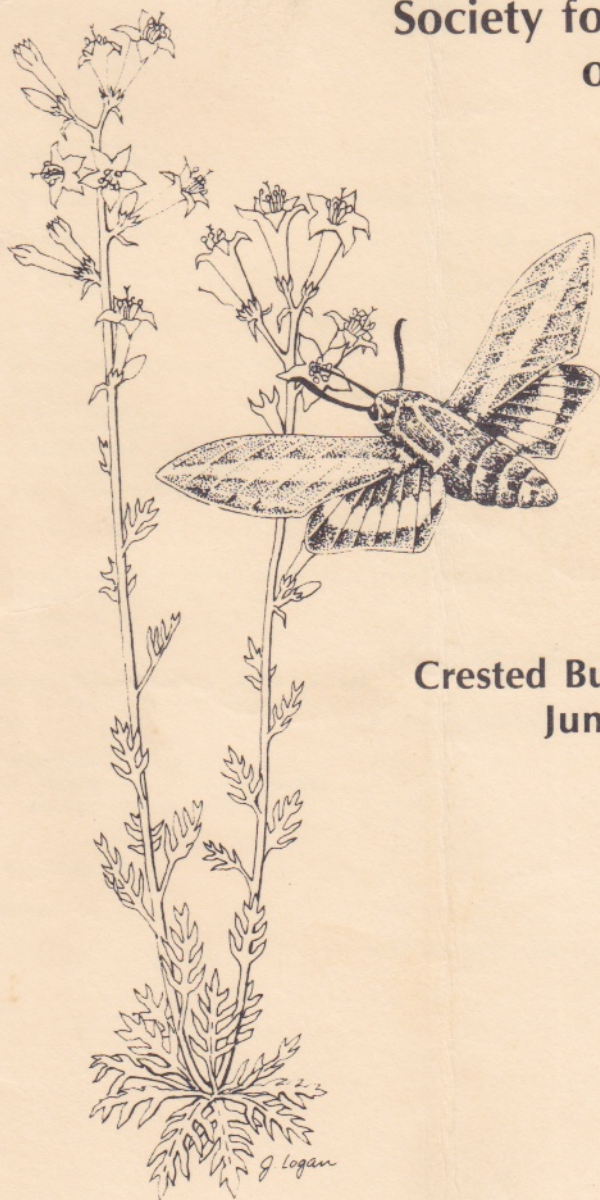


**American Society of Naturalists  
Society for the Study  
of Evolution**



**Crested Butte, Colorado  
June 23-27, 1984**



SCHEDULE OF EVENTS

SATURDAY, JUNE 23

Registration	1:00-8:00 p.m.	Conference Center
SSE Council Meeting	8:00 p.m.	Golddale Board Room
Social	8:00 p.m.	Conference Center

SUNDAY, JUNE 24

Breakfast	7:00 a.m.	
Registration	8:30 a.m.-12:00 noon	Conference Center
Book Display	8:30 a.m.-5:00 p.m.	Golddale Board Room
Poster Session	8:30 a.m.-11:45 a.m.	Poverty Gulch Room
Concurrent Contributed Paper Sessions	8:30 a.m.-11:45 a.m.	
Evolutionary Ecology of Plants		Ruby Gulch Room
Theory		Rustlers Gulch Room
Hybrid Zones		Copper Queen Room
Population Biology of		Forest Queen Room
Herbivorous Insects		
Evolutionary Morphology		Mall Board Room
Mate Choice and Mating Systems		Silver Queen Room
Lunch	11:45 a.m.-1:15 p.m.	
Symposium: John C. Johnson Memorial Symposium: Functional and Ecological Aspects of Form Evolution	1:30 p.m.-4:45 p.m.	Conference Center
Barbecue, Rocky Mountain Biological Lab		
Buses begin at 5:30 p.m.		
Dinner	5:45 p.m.-7:15 p.m.	
SSE Presidential Address: William L. Brown, Jr. Punk Eek and the Curious Theory	9:00 p.m.	Conference Center

MONDAY, JUNE 25

Breakfast	7:00 a.m.	
Book Display	8:30 a.m.-5:00 p.m.	Golddale Board Room



## Schedule of Events, Continued

Concurrent Contributed Paper Sessions	8:30 a.m.-11:45 a.m.	
Plant Sex I		Ruby Gulch Room
Evolution of Sex and Sexual Dimorphism		Rustlers Gulch Room
Evolutionary Ecology of Animals		Copper Queen Room
Analyses of Polymorphisms		Forest Queen Room
Population Structure		Mall Board Room
Hybrid Dysgenesis and Extra Chromosomal Factors		Silver Queen Room
Evolutionary Rates		Poverty Gulch Room
Lunch and SSE Business Meeting	11:45 a.m.-1:15 p.m.	
Symposium: Hybridization in Evolution	1:30 p.m.-5:00 p.m.	Conference Center
Joint ASN/SSE Banquet	6:00 p.m.	Conference Center
ASN Presidential Address: Robert R. Sokal. The Continuing Search for Order	8:00 p.m.	Conference Center

## TUESDAY, JUNE 26

Breakfast	7:00 a.m.	
Book Display	8:30 a.m.-5:00 p.m.	Golddale Board Room
Concurrent Contributed Paper Sessions	8:30 a.m.-11:45 a.m.	
Plant Sex II		Ruby Gulch Room
Molecular Evolution		Rustlers Gulch Room
Allozymes and Genetic Structure		Copper Queen Room
Coevolution and Species Interactions		Forest Queen Room
Quantitative Genetics and Character Displacement		Mall Board Room
Life History Variation		Silver Queen Room
Lunch and ASN Business Meeting	11:45 a.m.-1:15 p.m.	
Symposium: Sexual Selection	1:30 p.m.-5:00 p.m.	Conference Center
Barbecue, Rocky Mountain Biological Lab		
Buses begin at 5:30		
Dinner	5:45 p.m.	

## Schedule of Events, Continued

## WEDNESDAY, June 27

Breakfast	7:00 a.m.	
Symposium: Microevolution in Prokaryotes and Eukaryotes	8:30 a.m.-12:00 noon	Conference Center
Lunch	12:00 noon	

Poster Session	Sunday, June 24	Poverty Gulch Room
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- Ankney, P.F. Arizona State University. Mate reproductive contribution in the genus *Drosophila*: Testing a hypothesis.
- Boag, P.T. Queen's University. Sensitivity and heritability of external morphology in Zebra finches.
- Calder, W.A., III. University of Arizona. Breeding and migratory populations of *Selasphorus* hummingbirds: Dynamics and evolution.
- Chew, F.S. and S.P. Courtney. Tufts University. Plant density variation limits herbivory.
- Henderson, N.L. University of Michigan. Evolution of *E. coli* during long term culture.
- Holtsford, T. University of California, Irvine. Fruiting strategy of a montane lily: Plasticity vs. selectivity.
- Oeller, P.W. University of Michigan. Frequency of transposition of Ty-1 elements in long term continuous cultures of *Saccharomyces cerevisiae*.
- Reynolds, M.D. and W. Koenig. University of California, Berkeley. Reproductive success and coloniality of Yellow-billed Magpies.
- Svendsen, G.E. Ohio University. Why be a large and monogamous rodent? The beaver model.
- Vargas, C. University of Michigan. Plasmid evolution during long term bacterial culture.



Sunday, June 24, 1984

Ruby Gulch Room

Session Title: Evolutionary Ecology of Plants

Session Leader: C. Schlichting

- 8:30 Brauner, S. University of Montana. The genetic basis of phenotypic differences between an annual plant species and its progenitor.
- 8:50 Salzman, A.G. University of Chicago. The fitness function and selection differential for a quantitative physiological trait in contrasting habitats: salt tolerance in Ambrosia psilostachya.
- 9:10 Roose, M.L. University of California, Riverside. Effects of pasture age and grazing on the distribution of rye grass clones.
- 9:30 Kalisz, S. University of Chicago. Natural selection on germination time in a winter annual.
- 9:50 Tabashnik, B.E. University of Hawaii. Ecological factors explain patterns of evolution of pesticide resistance.
- 10:10 Break
- 10:30 McKnight, K.B. University of Michigan. Morphological adaptations of mushroom sporocarps with respect to water stress.
- 10:50 Knox, R.B., J. Kenrick, R. Marginson, and P. Bernhardt. University of Melbourne. Evolutionary significance of extra-floral nectaries in Acacia (Mimosoideae).
- 11:10 Michaels, H.J. and F.A. Bazzaz. University of Illinois. Colonizing ability of sexual and asexual Antennaria parlinii: Dispersal potential and pollination limitation.
- 11:30 Schlichting, C. University of Texas. Phenotypic plasticity: an evolving plant character.

Sunday, June 24, 1984

Rustlers Gulch Room

Session Title: Theory

Session Leader: M.B. Williams

- 8:30 Walsh, B. The University of Chicago. Evolution of multigene families in finite populations under selection and biased gene conversion.
- 8:50 Brues, A.M. University of Colorado. A multi-parameter stochastic simulation program for microevolution.
- 9:10 Queller, D.C. University of Illinois. Inclusive fitness in non-additive interactions.
- 9:30 Caswell, H. and D. Weeks. Woods Hole Oceanographic Institution. Two-sex population models: The dynamic consequences of frequency dependent demography.
- 9:50 Nunney, L. University of California, Riverside. Defining group selection.
- 10:10 Break
- 10:30 Williams, M.B. University of Delaware. What do evolutionary laws look like? Some answers.
- 10:50 Altenberg, L. and M.W. Feldman. Stanford University. The evolution of modifier genes: New results from a general approach.
- 11:10 Goodnight, C.J. University of Illinois at Chicago. The effect of population subdivision on the correlation between loci.
- 11:30 Asmussen, M.A. University of Georgia. The dynamics of second order interactions in the three locus hitchhiking modes: A preliminary report.



Session Title: Hybrid Zones

Session Leader: T.D. Kocher

- 8:30 Moore, W.S. Stability of the Northern Flicker hybrid zone.
- 8:50 Shaw, D.D., D.J. Coates, and P. Wilkinson. Australian National University. Temporal variation in the structure of a chromosomal hybrid zone.
- 9:10 Harrison, R. Yale University. MtDNA variation across a narrow hybrid zone.
- 9:30 Featherston, D.W. and K. Rothfels. Cornell University. Clines in chromosomal inversions of blackfly sibling species: Hybrid zone artifacts or indices of the ancestral zone of speciation?
- 9:50 Kocher, T.D. University of Colorado. Multilocus analyses of a hybrid zone.
- 10:10 Break
- 10:30 Kochmer, J.P. Yale University. Hybridization and speciation in the soldier beetle, Chauliognathus pennsylvanicus.
- 10:50 Collins, M.M. University of Wisconsin. Hybridization and genetic compatibility among Hyalophora moths.
- 11:10 Kettler, M.K. University of Illinois. Genetic distances and differences in gene expression among species of Mudminnows (Esocidae:Umbridae).
- 11:30 Danzmann, R.G., M.M. Ferguson, and F.W. Allendorf. University of Montana. Developmental genetics of salmonid fishes: Developmental divergence among hatchery strains of rainbow trout.

Session Title: Population Biology of Herbivorous  
Insects

Session Leader: D.J. Futuyma

- 8:30 Harshman, L.G. and D.J. Futuyma. University of California, Davis.  
Explorations of the relationship between parthenogenetic and sexual  
contingents in a population of the fall cankerworm Alsophila  
pometaria (Lepidoptera: Geometridae).
- 8:50 Bowers, M.D. and G. Puttick. Harvard University. The fate of ingested  
secondary compounds: Iridoid glycosides and lepidopteran herbivores.
- 9:10 Morrow, P.A. and D.W. Tonkyn. University of Minnesota. Chemical  
similarity among plants: Effects on host location by generalist and  
specialist herbivores.
- 9:30 Lofdahl, K. University of Chicago. Natural selection for host plant  
preference. M. j. g. v. e. n. s. i. s
- 9:50 Hoffmann, A. University of California, Davis. Conditioning in  
Drosophila: An apple and orange story.
- 10:10 Break
- 10:30 Stermitz, F.R. Colorado State University. Castilleja (Scrophulariaceae)  
and Platyptilia (Pterophoridae) interaction. A case of coevolution?
- 10:50 Dodson, G. University of New Mexico. Examination of two morphs of a gall  
forming tephritid fly: Evolutionary divergence?
- 11:10 Bierbaum, T.J. and G.L. Bush. Michigan State University. Experimental  
tests of differentiation in the behavioral and survival aspects of  
host plant use by Rhagoletis mendax and Rhagoletis pomonella  
(Diptera, Tephritidae).
- 11:30 Menken, S.B.J. Vrije University. Genetic divergence, population structure  
and evolutionary potential of leaf miners (Lepidoptera,  
Nepticulidae).



Sunday, June 24, 1984

Mall Board Room

Session Title: Evolutionary Morphology

Session Leader: H.B. Shaffer

- 8:30 Kingsolver, J.G. and M.A.R. Koehl. University of California, Berkeley. Aerodynamics, thermoregulation, and the evolution of insect wings: Differential scaling and evolutionary change.
- 8:50 Riska, B. and W. Atcheley. University of Wisconsin. Genetics and evolution of mammalian brain size.
- 9:10 Shaffer, H.B. University of Wisconsin. Genetic correlations and independence of systematic characters: A quantitative genetic approach.
- 9:30 Angus, R. University of Alabama in Birmingham. Fluctuating asymmetry in pure vs. intergrade populations of mosquitofish.
- 9:50 Soule, M. University of Michigan. Directed release of morphological variation in natural populations.
- 10:10 Break
- 10:30 Hanken, J. University of Colorado. Variation in the cranial ossification sequence of a "primitive" frog: Implications for skull evolution.
- 10:50 Wake, M.H. University of California, Berkeley. Heterochrony and miniaturization in caecilians (Amphibia: Gymnophiona).
- 11:10 Bemis, W.E. University of Chicago. Convergent evolution of jaw opening mechanisms in lungfishes and tetrapods.
- 11:30 Liem, K.F. Harvard University. Intraspecific macroevolution: Functional morphology and ecology of a polymorphic cichlid fish.

Sunday, June 24, 1984

Silver Queen Room

Session Title: Mate Choice and Mating Systems

Session Leader: D.E. McCauley

- 8:30 Burley, N. University of Illinois at Urbana-Champaign. Effect of relative attractiveness on male reproductive success in the zebra finch (Poephila guttata).
- 8:50 Heisler, I.L. Rutgers University. Multivariate models of mate choice: An exploration of Fisher's analogy between sexual and artificial selection.
- 9:10 Houck, L.D., S. Arnold, and R. Thisted. The University of Chicago. A statistical study of mate choice.
- 9:30 Boake, C.R.B. The University of Chicago. Empirical analysis of female choice and male genetic quality in the red flour beetle, Tribolium castaneum.
- 9:50 Rutowski, R.L. Arizona State University. Evidence for mate choice in a sulphur butterfly (Colias eurytheme).
- 10:10 Break
- 10:30 McCauley, D.E. Vanderbilt University. The effect of multiple mating on genetic relatedness in larval aggregations of willow leaf beetles.
- 10:50 Breden, F. University of Missouri. The effect of genetic correlations between mates and between foundresses on the evolution of social behavior.
- 11:10 Harshman, L. University of California, Davis. Male effect on fecundity in Drosophila melanogaster.
- 11:30 Robertson, H.M. University of Wisconsin. Asymmetrical interspecific mating, species selection, and new mutants affecting mating behavior in Drosophila melanogaster.



Sunday Afternoon, June 24

Conference Center

1:30 p.m. Opening Remarks: R.B. Willey, President, Rocky Mountain Biological Lab, and W. Watt, Chairman, Organizing Committee.

Symposium I. Functional and Ecological Aspects of Form Evolution. John C. Johnson Memorial Symposium. Co-sponsored by the Society for the Study of Evolution and the Rocky Mountain Biological Laboratory.

1:40 Walter Bock, Columbia University. In Defense of the Adaptationist Program.

2:25 Carole Hickman, University of California at Berkeley. Ecological and Functional Analyses Reveal Convergence in Gastropod 'Morphoclines'.

3:10 Break

3:25 Jonathan Roughgarden, Stanford University. Population Dynamics and the Evolution of Individual Form.

4:10 Maxine Watson. Indiana University. Constraints on the Expression of Phenotypic Plasticity in Plants.

Monday, June 25, 1984

Ruby Gulch Room

Session Title: Plant Sex I

Session Leader: M. Farris

8:30 Waller, D. University of Wisconsin, Madison. Developmental constraints on plant breeding systems.

8:50 Lertzman, K. and L. Gass. University of British Columbia. Optimal outcrossing and pollen dispersal in Castilleja miniata.

9:10 Hamilton, C.W. Washington University. Breeding biology of two heterostylous neotropical species of Psychotria L. (Rubiaceae).

9:30 Shea, K.L. University of Colorado. Mating system and population structure in Engelmann spruce.

9:50 Hamrick, J.L. University of Kansas. Temporal variation in the mating system of Lodgepole pine.

10:10 Break

10:30 Farris, M. and J. Mitton. University of Colorado. Population density, outcrossing rate, and heterozygosity in Ponderosa pine.

10:50 Campbell, D.R. and N.M. Waser. University of California, Riverside. Evolution of outcrossing distance: Computer simulations.

11:10 Meagher, T. Duke University. Studies of paternity within a natural plant population.

11:30 Marshall, D.L. and N.C. Ellstrand. University of California, Riverside. Mechanisms and consequences of multiple paternity in wild radish.



Monday, June 25, 1984

Rustlers Gulch Room

Session Title: Evolution of Sex and Sexual Dimorphism

Session Leader: R. Michod

- 8:30 Petersen, C. University of Arizona. Gender allocation in simultaneous hermaphrodites: Models with size structured populations.
- 8:50 Fischer, E.A. University of Washington. Social System vs. "Ecology" in the evolution of simultaneous hermaphroditism in fishes.
- 9:10 Moritz, C. Australian National University. Parthenogenesis in the gekko, Heteronotia.
- 9:30 Cox, P.A. and J. Sethian. Brigham Young University. Gamete motion, search, and the evolution of anisogamy.
- 9:50 Michod, R. University of Arizona. Genetic repair and the evolution of sex.
- 10:10 Break
- 10:30 Bleiweiss, R. American Museum of Natural History. Evolution of sexual dichromatism in andean hummingbirds.
- 10:50 Woolbright, L.L. State University of New York, Albany. Sexual dimorphism in body size of Eleutherodactylus coqui.
- 11:10 Howard, R.D. and A.G. Kluge. Purdue University. Variation in reproductive success and sexual dimorphism in woodfrogs.
- 11:30 Cheverud, J.M. Northwestern University. The quantitative assessment of phylogenetic constraints and the determinants of sexual dimorphism in primates.

Monday, June 25, 1984

Copper Queen Room

Session Title: Evolutionary Ecology of Animals

Session Leader: D.L. Soltz

- 8:30 Davis, C.L. McKendree College. Artificial selection for pupal sex ratio in flour beetles.
- 8:50 Holmes, L. University of California, Santa Cruz. Size determines web usurpation regardless of sex: An outcome not predicted by evolutionary theory.
- 9:10 Gutzke, W.H.N. Colorado State University. Influence of the nest environment on sexual differentiation and on other egg and hatchling variables of painted turtles (Chrysemys picta): pieces of a puzzle.
- 9:30 Toolson, E.C. University of New Mexico. Effects of desiccation on and components of fitness in Drosophila pseudoobscura.
- 9:50 Hazel, W.N. DePauw University. The evolution of environmentally cued pupal color polymorphisms in swallowtail butterflies.
- 10:10 Break
- 10:30 Antolin, M. University of Alberta. Habitat selection by two aphid species.
- 10:50 Dodson, G. University of New Mexico. Examination of 2 morphs of a gall forming Tephritid: evolutionary divergence?
- 11:10 Brown, W.L., Jr. Cornell University. Evolution of predation in ponerine ants.
- 11:30 Soltz, D.L. California State University. Evolution in constant and fluctuating environment: A re-evaluation of thermal tolerances of desert pupfishes (Cyprinodon).



Monday, June 25, 1984

Forest Queen Room

Session Title: Analyses of Polymorphisms

Session Leader: J.G. Hall

- 8:30 Ruiz, A., M. Santos, and A. Fontdevila. The University of Arizona. Influence of alcohol on the second chromosome polymorphism in experimental populations of Drosophila buzzatii.
- 8:50 Godt, M. W. and E. H. Liu. Savannah River Ecology Laboratory. Comparison of kinetic properties of malate dehydrogenase in the three North American cattail species.
- 9:10 Zera, A.J. University of Texas. PGI allozymes in waterstriders: Adaptation to differing thermal regimes and metabolic rates.
- 9:30 Eanes, W. State University of New York, Stony Brook. Inbreeding depression and sex-limited viability effects on the X chromosome of Drosophila melanogaster.
- 9:50 Snyder, L.R.G. University of California, Riverside. Molecular evolution of deer mouse hemoglobins.
- 10:10 Break
- 10:30 Gonzalez-Villassnor, I. and D. Powers. Johns Hopkins University. Allozymes of NADP-dependent isocitrate DH from Fundulus heteroclitus: Kinetic analyses in relation to temperature.
- 10:50 Ropson, I. and D. Powers. Johns Hopkins University. Geographical variation in 18 polymorphic loci in the fish Fundulus heteroclitus.
- 11:10 Gourlie, B., Y. Lin, A. DeVries, D. Powers, and R.C. Huang. Johns Hopkins University. NA and protein evidence for a multigene family of antifreeze proteins.
- 11:30 Hall, J.G. University of California, San Diego. How do enzymes adapt to temperature? Isolation and characterization of glucosephosphate isomerases from two bivalve molluscs that inhabit different thermal environments.

Monday, June 25, 1984

Mall Board Room

Session Title: Population Structure

Session Leader: R.D. Sage

- 8:30 Heywood, J.S. University of Miami. Fitness variation and genetic drift in size-structured populations of annual plants.
- 8:50 Schwaegerle, K.E. and F.A. Bazzaz. University of Illinois. Heritabilities and additive genetic variable for 16 metric characters in 7 populations of Phlox drummondii contrasted with electrophoretic variation.
- 9:10 King, R.B. Purdue University. Enzyme and pattern polymorphism in Lake Erie water snakes.
- 9:30 Innes, D.J. and P.D.N. Hebert. University of Windsor. Genetic differences between sexual and obligately asexual populations of Daphnia pulex.
- 9:50 McLellan, T. and L. Jorde. University of Utah. The relationship between demographic history and genetic drift in some isolated human populations.
- 10:10 Break
- 10:30 Linhart, Y.B. and J. Mitton. University of Colorado. Relationships among growth rate, reproduction and protein heterozygosity in ponderosa pine.
- 10:50 O'Malley, D.M. University of Massachusetts. Organization of genetic variation in Lake States jack pine (Pinus banksiana).
- 11:10 Knowles, P. Lakehead University. Comparison of artificial and natural selection: Differences in genetic structures of conifer populations.
- 11:30 Sage, R.D. Genetic population structure and gene flow in leopard frogs (Rana pipiens complex).



Monday, June 25, 1984

Silver Queen Room

Session Title: Hybrid Dysgenesis and Extra  
Chromosomal Factors

Session Leader: S.W. Skinner

8:30 Lenington, S. and L. Heisler. Rutgers University. Population interaction as a source of variation in the segregation distortion of t-haplo types in wild house mice.

8:50 Phillis, R.W. Indiana University. The effect of hybrid dysgenesis on the response to selection for a quantitative trait in Drosophila melanogaster.

9:10 Simmons, G.M. University of California, Davis. Gonadal dysgenesis factors in a California population of Drosophila melanogaster.

9:30 Skinner, S.W. University of Wisconsin. Son-killer: A third extrachromosomal factor affecting the sex ratio in the parasitoid wasp, Nasonia vitripennis.

9:50 Werren, J.H. Walter Reed Army Institute of Research. Genetic conflict and the paternal inheritance of an extrachromosomal sex ratio factor.

10:10 Break

10:30 Takahata, N. University of Texas at Houston. Extranuclear gene flow.

Monday, June 25, 1984

Poverty Gulch Room

Session Title: Evolutionary Rates

Session Leader: P.B. Samollow

8:30 Pease, C. University of Chicago. A coevolutionary isomorphism applied to the reversal of dominance and competitive indeterminacy.

8:50 Clark, A. Penn State University. The order of genetic interaction.

9:10 Ingold, J.L. Miami University, Oxford. Evolution of cranes and calibration of the molecular clock.

9:30 Nichols, J.D. U.S. Fish and Wildlife Service. Taxonomic extinction probabilities and their variation: Methods for estimation and inference.

9:50 Rosenzweig, M.L. University of Arizona. Constraints on lag loads: Return of the Red Queen.

10:10 Break

10:30 Wade, M.J. The University of Chicago. The evolution and coevolution of competitive ability.

10:50 Felsenstein, J. University of Washington. A bootstrap approach to placing confidence limits on phylogenies.

11:10 James, M.J. University of California, Berkeley. Endemicity and evolutionary rates in Galapagos marine invertebrates.

11:30 Samollow, P.B. Southwest Foundation for Biomedical Research. Genetic and morphologic differentiation among limpet species (genus Cellana) endemic to the Hawaiian archipelago.



Monday Afternoon, June 25

Conference Center

Symposium II. Hybridization in Evolution. Co-sponsored by the Society for the Study of Evolution and the American Society of Naturalists.

- 1:30 Margaret Kidwell, Brown University. Hybrid Dysgenesis and the Evolution of Mobile Elements in Drosophila.
- 2:10 Gregory Whitt, University of Illinois at Urbana. Altered Developmental Patterns of Gene Expression of Centrarchid Fishes.
- 2:50 Break
- 3:05 Nick Barton, University College-London. Hybrid Zones and the 'Shifting Balance'.
- 3:45 John Hafner, Occidental College. Genomic Interactions and the Dynamics of Hybridization in Vertebrates.
- 4:25 John Endler, University of Utah. The Evolutionary Significance of Hybridization.

Ruby Gulch Room

Tuesday, June 26, 1984

Session Title: Plant Sex II

Session Leader: G. Muenchow

- 8:30 Copenhaver, C. University of California, Irvine. Pollination ecology of Ipomopsis aggregata in the eastern Sierra: a possible example of embryo abortion as a mate selection process.
- 8:50 McKenna, M.A. State University of New York, Stony Brook. Gametophytic selection in Dianthus chinensis (L. Caryophyllaceae): Effects on sporophytic quality.
- 9:10 Thomson, J., N. Waser, and M. Price. State University of New York, Stony Brook. Comparison of fluorescent powder and pollen transport by bumble bees.
- 9:30 Schmitt, J. Brown University. Differential disposal of seeds from chasmogamous and cleistogamous flowers in Impatiens capensis.
- 9:50 Taylor, O.R., Jr. and D.W. Inouye. University of Kansas. Synchrony and periodicity of flowering in Frasera speciosa (Gentianaceae).
- 10:10 Break
- 10:30 Givnish, T.J., P.S. Ashton, and S. Appanah. Harvard University. Staggered flowering in dipterocarps: New insights into floral induction and the origin of mast fruiting in the aseasonal tropics.
- 10:50 Bierzychudek, P. Pomona College. Patterns of geographical parthenogenesis in plants.
- 11:10 Muenchow, G. University of Colorado. Characters associated with dioecy, a multivariate study.



Tuesday, June 26, 1984

Rustlers Gulch Room

Session Title: Molecular Evolution

Session Leader: T.P. Snyder

- 8:30 Modi, W.S. University of Illinois. Quantitative phyletic analyses of chromosomal banding patterns among New World microtine rodents.
- 8:50 Bermingham, E. University of Georgia. Zoogeography of freshwater fishes in the southeastern United States as determined by genetic differentiation in mitochondrial DNA.
- 9:10 Ashley, M. University of California, San Diego. Variation in mitochondrial DNA's among Channel Island deer mice, Peromyscus maniculatus.
- 9:30 Snyder, T.P. and R.D. Larsen. Michigan Technological University. Mitochondrial DNA heterogeneity in ciscoes from Lake Superior and small isolated lakes.
- 9:50 Chapman, R.W. Chesapeake Bay Institute. Mitochondrial DNA analysis of striped bass and their F<sub>1</sub> hybrids.
- 10:10 Break
- 10:30 Li, W., C. Wu, and C. Luo. University of Texas. Pattern of nucleotide substitution in pseudogenes and its evolution implications.
- 10:50 Chao, L. Northwestern University. The evolution of transposable elements and mutator genes.
- 11:10 Learn, G.H., Jr. Washington University, St. Louis. Geographical patterns of variability of ribosomal gene spacer length in a population of Clematis fremontii.
- 11:30 Lee, L.W. University of Michigan. Evolution of the structural locus for acid phosphatase in Saccharomyces cerevisiae.

Tuesday, June 26, 1984

Copper Queen Room

Session Title: Allozymes and Genetic Structure

Session Leader: N.C. Ellstrand

- 8:30 Schwartz, O.A. University of Northern Iowa. Lack of protein polymorphism in the endemic relict Chrysosplenium iowense (Saxifragaceae).
- 8:50 McCracken, G.F. University of Tennessee. Communal nursing and genetic structure in maternity colonies of Mexican free-tailed bats.
- 9:10 Romano, M.A., D.B. Ralin, S.I. Guttman, and J.H. Skillings. Miami University, Oxford. Parallel electromorph variation in the grey treefrog complex, Hyla chrysoscelis and H. versicolor.
- 9:30 Cothran, E.G. Southwest Foundation for Biomedical Research. Inbreeding and genetic variability in Standardbred horses.
- 9:50 Tonsor, S.J. West Virginia University. Intrapopulational variation in pollen-mediated gene-flow in Plantago lanceolata.
- 10:10 Break
- 10:30 Grimaldi, D. Cornell University. Monolectic foraging of Bombylius major (Diptera: Bombyliidae) and its effect on gene flow in Houstonia caerulea (Rubiaceae).
- 10:50 Brussard, P.F. Cornell University. Gradient analysis of Drosophila populations.
- 11:10 Cohan, F.M. University of California, Davis. Latitudinal cline in Drosophila melanogaster for knockdown resistance to ethanol fumes and for rates of response to selection for further resistance.
- 11:30 Ellstrand, N.C. and D.L. Marshall. University of California, Riverside. Impact of domestication on distribution of allozyme variation within and among cultivars of radish.



Tuesday, June 26, 1984

Forest Queen Room

Session Title: Coevolution and Species Interactions Session Leader: M. Rossiter

- 8:30 Williams, E.H. and M.D. Bowers. Hamilton College. Host plant selection: phenological restrictions for Euphydryas gillettii.
- 8:50 Ohta, A.T. University of Hawaii. The evolution of host specificity in Drosophila grimshawi.
- 9:10 Rosenzweig, M.L., Z. Abramsky, B. Kotler, and W. Mitchell. University of Arizona. Can we estimate population interactions using regression techniques?
- 9:30 Davis, M.L. University of Michigan, Flint. Variation in shikimic acid dehydrogenase genotypes in Douglas-fir and susceptibility to defoliation by Spruce budworm.
- 9:50 Saffo, M.B. Swarthmore College. Endosymbiosis and the evolution of mutualism: A view of lichens.
- 10:10 Break
- 10:30 Beattie, A.J., C. Turnbull, R.B. Knox, and T. Hough. Northwestern University. Implications of the vulnerability of pollen and fungal spores to ant secretions.
- 10:50 McKone, M. and D. Tonkyn. University of Minnesota. Sexual allocation in Ambrosia artemisiifolia: the effects of soil moisture and of Philaenus spumarius, a xylem-feeding herbivore.
- 11:10 Keinsinger, P., S. Kinsman, K.G. Murray, and W.H. Busby. University of Florida. Effects of floral neighborhoods on heterospecific pollen loads received by tropical bird-pollinated flowers: Evidence for competition and divergence?
- 11:30 Rossiter, M. University of Texas. Sunflower roulette: The interplay between floral phenology and herbivore ontogeny.

Tuesday, June 26, 1984

Mall Board Room

Session Title: Quantitative Genetics and Character Displacement Session Leader: L. Leamy

- 8:30 Padilla, D.K. The University of Alberta. The role of form in influencing a feeding specialization.
- 8:50 Janssen, G.M. Free University. Genetical ecology in springtails -- maternal effects and heritability of life-history traits.
- 9:10 Via, S. University of Chicago. Genotype-environment interaction and the evolution of phenotypic plasticity.
- 9:30 Fong, D.W. and D.C. Culver. Northwestern University. Quantitative genetics of eye degeneration and antennal elaboration in a cave-dwelling amphipod, Gammarus minus.
- 9:50 Lofsvold, D. University of Chicago. A test of the homogeneity of quantitative genetic parameters among species of Peromyscus.
- 10:10 Break
- 10:30 Leamy, L. California State University. Heterosis of brain size in house mice.
- 10:50 Milligan, B.G. University of California, Davis. Character displacement: Persistence of competitive interactions and evolutionary outcomes.
- 11:10 Taper, M. University of California, San Diego. Quantitative genetic models for the coevolution of character displacement.
- 11:30 Abrams, P.A. University of Minnesota. A simple model of character displacement.



Tuesday, June 26, 1984

Silver Queen Room

Session Title: Life History Variation

Session Leader: W.J. Etges

- 8:30 Grosberg, R.K. University of California, Davis. The principle of allocation and life history variation in the colonial sea-squirt Botryllus schlosseri.
- 8:50 Luckinbill, L.S., R. Arking, and M.J. Clare. Wayne State University. Selection for delayed senescence in Drosophila melanogaster.
- 9:10 Clare, M.J. and L.S. Luckinbill. Wayne State University. The effects of gene-environment interactions on the expression of longevity.
- 9:30 Schultz, D.L. University of Michigan. Habitat specific life histories in the Johnny Darter (Etheostoma nigrum).
- 9:50 Abugov, R. Northwestern University. Sexuality and survival in theories for life history.
- 10:10 Break
- 10:30 Heckel, D.G. Clemson University. Evolutionary stability of complex life cycles.
- 10:50 Mason, P. and S.I. Rothstein. University of California, Santa Barbara. The Rufous Hornero: A source of selection on egg size in a brood parasite, the Shiny Cowbird.
- 11:10 Boyce, M.S. University of Wyoming. Clutch size optimization independent of the cost of reproduction.
- 11:30 Etges, W.J. University of Rochester. Life history consequences of inversion polymorphisms in Drosophila robusta.

Symposium, Continued

Tuesday Afternoon, June 26

Conference Center

Symposium III. Sexual Selection. Sponsored by the American Society of Naturalists.

- 1:30 Mark Kirpatrick, University of California at Berkeley. Recent Challenges to Darwin's Theory of Sexual Selection.
- 2:10 Peter O'Donald, Cambridge University. Sexual Selection and the Genetics of Mating Preference.
- 2:50 Break
- 3:05 Gerald Borgia, University of Maryland-College Park. Testing Models of Sexual Selection with the Satin Bowerbird.
- 3:45 Kenneth Kaneshiro, University of Hawaii at Manoa. The Dynamics of Speciation in Hawaiian Drosophila: the Roles of Sexual Selection and Natural Hybridization.
- 4:25 Therese Markow, Arizona State University. Sexual Selection in the Evolution of Drosophila Mating Systems.

Wednesday Morning, June 27

Conference Center

Symposium IV. Microevolution in Prokaryotes and Eukaryotes. Sponsored by the Society for the Study of Evolution.

- 8:30 Daniel Dykhuizen, Washington University at St. Louis. Chemostats as Tools for Experimental Studies of Evolution.
- 9:10 Bruce Levin, University of Massachusetts at Amherst. Infectious Inheritance, Recombination, and the Evolution of Niche Expansion in Bacteria.
- 9:50 Break
- 10:05 Jeff Mitton, University of Colorado at Boulder. The Axis of Individual Heterozygosity.
- 10:45 Dennis Powers. Johns Hopkins University. Molecular Mechanisms for Adapting to a Changing Environment.
- 11:25 Ward Watt, Rocky Mountain Biological Lab/ Stanford University. Alternative Paradigms in Evolutionary Genetics.



ADDITION TO POSTER SESSION

Ruiz, A., A. Fontdevila, M. Santos, M. Sevane and E. Torroja. Dept. of Ecology and Evolutionary Biology, University of Arizona and Departamento de Genetica, Facultad de Ciencias, Universidad Autonoma de Barcelona, Spain; Departamento de Genetica, Facultad de Biologia Universidad de Santiago de Compostela, Spain and Instituto de Genetica C.S.I.C., Madrid, Spain.

An attempt to detect selection acting on the chromosomal polymorphism in a natural population of Drosophila buzzatii.

CHANGES IN CONTRIBUTED PAPERS.

Paper Deleted

Houck, Arnold and Thisted - Sunday, 9:10 AM, Silver Queen Room

Replaced By

Vrijenhoek, R.D., Rutgers University. Genotype specific mortality in sexual and asexual fish.

Paper Deleted

Modi, W.S. - Tuesday, 8:30 AM, Rustlers Gulch Room

Replaced By

Szymura, J., C. Spolsky and T. Uzzell. Academy of Natural Sciences of Philadelphia. Mitochondrial DNA in a hybrid zone between the European fire-bellied toads.

Paper Deleted

Knowles, P. Monday 11:10 AM, Mall Board Room

Replaced By

Calder, W. III. Rocky Mountain Biological Lab. Applications of allometry and physiological time scales to life histories of mammals and birds.

ADDITIONS OF PAPERS

11:30 AM, Tuesday Ruby Gulch Room

Parker, M. Local population differentiation for compatibility in an annual legume and its host-specific fungal pathogen.

10:50 AM, Monday, Silver Queen Room

Eric van den Berghe. Simon Fraser University. Competition, breeding success, and sexual selection in female salmon

PAPER DELETED

Lee, L. W. Tuesday 11:30 Rustlers Gulch Room