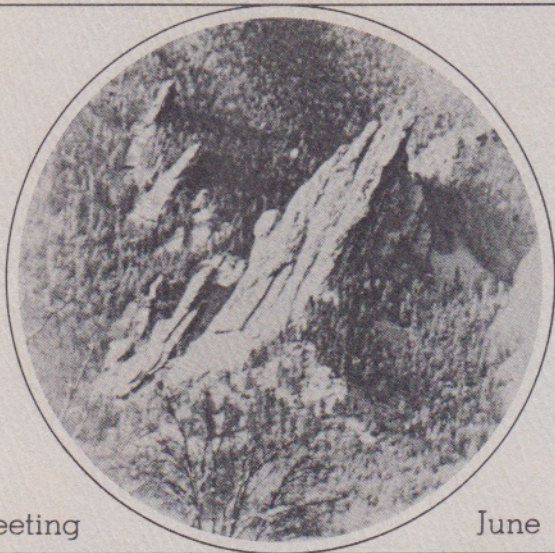


SOCIETY FOR THE STUDY OF EVOLUTION



Annual Meeting

June 17-20, 1979

UNIVERSITY OF COLORADO, BOULDER, COLORADO

SCHEDULE OF EVENTS

SUNDAY, JUNE 17

Registration and Information	3:00-9:00 p.m.	Kittredge Commons
Informal Mixer	5:00 p.m.	Kittredge Commons
Buffet	6:00-7:00 p.m.	Kittredge Commons

MONDAY, JUNE 18

Registration and Information	8:00 - noon	Glenn Miller Lounge, UMC
Symposium - Session I	8:30 - noon	Chemistry 140
Contributed Papers		
Session 1	1:20-5:00 p.m.	Chemistry 140
Session 2	1:20-5:00 p.m.	Chemistry 132
Session 3	1:20-5:00 p.m.	Forum, UMC

Banquet*	7:00-10:00 p.m.	Kittredge Dining Room
Presidential Address by Dr. Lincoln Brower - "Evolution Implications of the Overwintering of the Monarch Butterfly"		

TUESDAY, JUNE 19

Symposium - Session II	8:30 a.m. - noon	Chemistry 140
Business Meeting	12:00-1:30 p.m.	Kittredge Dining Room
Poster Session	2:00-6:00 p.m.	UMC 157
Contributed Papers		
Session 4	1:20-5:00 p.m.	Chemistry 140
Session 5	1:20-5:00 p.m.	Chemistry 132
Session 6	1:20-5:00 p.m.	Forum, UMC
Session 7	1:20-5:00 p.m.	UMC 156
Mountain Cookout	6:00-8:00 p.m.	Flagstaff Mountain

WEDNESDAY, JUNE 20

Symposium - Session III	8:30 a.m.- noon	Chemistry 140
Contributed Papers		
Session 8	1:20-5:00 p.m.	Chemistry 140
Session 9	1:20-5:00 p.m.	Chemistry 132
Session 10	1:20-5:00 p.m.	Forum, UMC

*Tickets required

Symposium:

Assessing Levels of Variation

SESSION I, June 18

Moderator: M. Clegg, University of Georgia, Athens

8:30 a.m. - L. Bogorad, Harvard University: Mapping the chloroplast chromosome.

9:30 a.m. - J. Avis, University of Georgia: The use of restriction endonucleases to measure mitochondrial DNA sequence heterogeneity in natural populations.

11:00 a.m. - R. Milkman, Iowa State University: The basis and significance of thermal stability variation.

SESSION II, June 19

Moderator: F. Ayala, University of California at Davis

8:30 a.m. - J. Coyne, Harvard University: Enzyme variation: where are we?

9:30 a.m. - J. Powell, Yale University: Gene versus Gene Regulation Polymorphisms: Experimental Results.

11:00 a.m. - G. Johnson, Washington University: Optimizing resolution in gel electrophoresis: new approaches to detecting variation in natural populations.

SESSION III, June 20

Moderator: D. Wake, University of California at Berkeley

8:30 a.m. - J. Mitton, University of Colorado: Protein heterogeneity, growth rate, and morphological variation.

9:30 a.m. - O. Solbrig, Harvard University: Variation in life-history characteristics in plants.

11:00 a.m. - L. Snyder, University of California at Riverside: Complex hemoglobin polymorphisms in the deer mouse, Peromyscus maniculatus.

Monday Afternoon, June 18, 1979

Concurrent Sessions

Session 1 Contributed Papers

Chemistry Bldg. Room 140

R. Koehn, State University of New York at Stony Brook

1:20 Singh, R. McMaster University, Ontario, Canada. Enzyme variation and insecticide resistance in Drosophila melanogaster.

1:40 Cavener, D. University of Georgia, Athens, GA. Biochemical adaptation of three enzyme polymorphisms to ethanol in Drosophila melanogaster: Evidence from two independent experiments.

2:00 Brighty, E. University of Connecticut, Storrs, CT. Seasonal changes in selection in populations of the white-footed mouse, Peromyscus leucopus.

2:20 Vacek, D. University of Arizona, Tucson, AZ. Maintenance of the ADH polymorphism in D. mojavensis: qualitative vs. quantitative alcohol variation.

2:40 Nixon, S. Syracuse University, Syracuse, NY. Environmentally induced isozymes and estimates of variability.

3:00 Break

3:20 Sbordoni, V. University of Roma, Rome, Italy. Estimates of genetic variability in populations of cave Arthropods with different degrees of specialization.

3:40 Byers, B. University of Colorado, Boulder, CO. Genetic differentiation and microhabitat selection in the black turban snail, Tegula funebris.

4:00 Bogart, J. University of Guelph, Ontario, Canada. Pinniped evolution: Natural selection for genetic similarity and reduced heterozygosity.

4:20 Pierce, B. and J. Mitton. University of Colorado, Boulder, CO. Allozyme variation among metamorphosing, neotenic, and cannibal morphs of the tiger salamander.

4:40 Carr, S. University of California, Berkeley, CA. Genetic variation in Sceloporus lizards (Iguanidae): Observation and theory.

5:00 Fairbanks, H. University of Arizona, Tucson, AZ. Genetic variation in Ashmunella levettei (Gastropoda: Pulmonata: Polygyridae).

Monday Afternoon, June 18, 1979

Concurrent Sessions

Session 2 Contributed Papers

Chemistry Bldg. Room 132

M. Grant, University of Colorado, Boulder, CO

- 1:20 Cook, R. E. Harvard University, Cambridge, MA. Survivorship and size in two species of Viola.
- 1:40 Stewart, S. C. University of Georgia, Athens, GA. Statistical demography I. Significance tests for life history parameters.
- 2:00 Iglich, E. University of Georgia, Athens, GA. Demographic genetics of Acer rubrum (Red Maple).
- 2:20 Reinartz, J. A. and J. Antonovics. Duke University, Durham, NC. Life history variation in a short-lived perennial monocarp, Verbascum thapsus L.
- 2:40 Evans, E. University of Texas, Austin, TX. Size- and age-specific life history characteristics of the pseudo-biennial Hymenopappus tenuifolius.
- 3:00 Break
- 3:20 Inouye, D. W. and O. R. Taylor. University of Maryland, College Park, MD. and University of Kansas, Lawrence, KS. The effect of generation time on *r* in Fraseria speciosa (Gentianaceae), a long-lived perennial monocarp.
- 3:40 Zuckerman, L. D. and N. H. Ringler. SUNY, Syracuse, NY. Regulation of life history strategies in white sucker populations.
- 4:00 Venable, D. L. University of Texas, August, TX. The life history consequences of seed dimorphism in Heterotheca latifolia (Compositae).
- 4:20 Smouse, P. E., Vitzthum, F. and J. V. Neel. University of Michigan, Ann Arbor, MI. An analysis of founder and lineal effects in the Yanomama, in relation to fission-fusion demography in small human populations.
- 4:40 Mueller, L. D. University of California, Davis, CA. Evolution, fitness and life history parameters.
- 5:00 Berven, K. A. University of Maryland, College Park, MD. Clinal variation in life history patterns: genetic or environmental?

Monday Afternoon, June 18, 1979

Concurrent Sessions

Session 3 Contributed Papers

UMC Forum Room

M. Tracey, Florida International University

- 1:40 Gibo, D. L. Erindale College, Mississauga, Ontario. Synthesis of magnetic material by grant silkworm moths (Saturniidae).
- 2:00 West, D. A. VPI and SU, Blacksburg, VA. Selective forces molding pupation site choice in swallowtail butterflies.
- 2:20 Hazel, W. VPI and SU, Blacksburg, VA. Environmental control of pupal color in two species of swallowtail butterflies in relation to their pupation sites.
- 2:40 Holland, M. M., L. P. Brower, J. N. Sieber and C. N. Roeske. Smith College, North Hampton, MA, Amherst College, Amherst, MA, and University of California, Davis, CA. Variability in cardenolide content of monarch butterflies raised on several California asclepiad species.
- 3:00 Break
- 3:20 Williams, K. University of Texas, Austin, TX. The ecological genetics of Drosophila melanogaster.
- 3:40 Sturgeon, K. University of Colorado, Boulder, CO. Population genetics of the pine beetle, Dendroctonus ponderosa: genetic differentiation associated with geography and host plant.
- 4:00 Ketzner, P. A. and B. P. Bradley. University of Maryland, Baltimore County, Baltimore, MD. Adaptation of copepods to constant and variable environments.
- 4:20 Sulzbach, D. Wesleyan University, Middletown, CN. Gradual changes in competitive ability in mixtures of Drosophila melanogaster.
- 4:40 Lynch, C. B. and D. S. Sulzbach. Wesleyan University, Middletown, CN. Genetic variation for temperature regulation among inbred and outbred stocks of laboratory mice: generality across populations.
- 5:00 Toliver, M. University of Illinois, Urbana-Champaign, IL. Efficacy of Batesian mimicry in an urban environment.

Tuesday Afternoon, June 19, 1979

Concurrent Sessions

Session 4 Contributed Papers

Chemistry Bldg. Room 140

P. Smouse, University of Michigan

- 1:20 Norman, R. University of Rochester, Rochester, NY. Genetic variation in developmental expression of amylase activity among chromosomal inversion of D. persimilis.
- 1:40 Futuyma, D. State University of New York, Stony Brook, NY. Genetic variation and host-plant relations in a parthenogenetic moth.

- 2:00 Dunlap, W. University of Nottingham, Nottingham, England. Gene flow and differentiation between populations of the long-toed salamander (Ambystoma macrodactylum).
- 2:20 Seager, R. University of California, Davis, CA. Interactions in fitness genes in Drosophila melanogaster.
- 2:40 Schnell, G., M. Kennedy, and R. Selander. University of Oklahoma, Norman, OK, Memphis State University, Memphis, TN, and University of Rochester, Rochester, NY. Concordance of non-metric morphological and genic variation in hybridizing populations of the house mouse.
- 3:00 Break
- 3:20 Davis, C. Oregon State University, Corvallis, OR. The maintenance and dynamics of the Thais emarginata shell color polymorphism.
- 3:40 Senner, J. Oregon Regional Primate Research Center, Beaverton, OR. Dermatoglyphic variability in four species of lemurs.
- 4:00 Samollow, P. University of Montana, Missoula, MT. Natural selection via differential mortality in the western toad, Bufo boreas.
- 4:20 Dermment, M. University of Wisconsin, Madison, WI. The evolution of body size and sexual dimorphism in baboons.
- 4:40 Arnason, E. University of California, Santa Barbara, CA. Random drift or selection at allozyme loci: an experimental study with Drosophila pseudoobscura.
- 5:00 Atchley, W. University of Wisconsin, Madison, WI. Quantitative genetic aspects of ontogenetic allometry in Rattus.

Tuesday Afternoon, June 19, 1979

Concurrent Sessions

Session 5 Contributed Papers

Chemistry Bldg. Room 132

J. Endler, University of Utah

- 1:20 Grant, M. C. University of Colorado, Boulder, CO. Gene duplication in the genus Chara (Chlorophyceae: Characeae).
- 1:40 Kathariou, S. University of California, Berkeley, CA. Ecological and evolutionary aspects of intraspecific differentiation in Fusarium Moniliforme.
- 2:00 Antlfinger, A. E. University of Georgia, Athens, GA. The genetic basis of physiological differentiation in a salt marsh plant.
- 2:20 Warwick, S. I. Biosystematics Research Institute, Ottawa, Ontario. Population differentiation in Plantago major L.

Levy

- 2:40 Gilmartin, A. J. Washington State University, Pullman, WA. Migratory routes inferred from numerical phenetic estimates of variability within and between populations of Stegnospora halimifolium in Baja, California.
- 3:00 Break
- 3:20 Givnish, T. J. Harvard University, Cambridge, MA. Gene flow vs local selection as a determinant of clines in serotiny in pitch pine (Pinus rigida).
- 3:40 Knowles, P. University of Colorado, Boulder, CO. Genetic characteristics associated with growth variability in Pinus ponderosa.
- 4:00 Bell, N. B. University of Houston, Houston, TX. Microgeographic structure of allozymic genotypes in an annual plant population.
- ~~4:20~~ Giles, B., University of Cambridge, Cambridge, England: Hordeum murinum - a case of enzyme homogeneity.

Tuesday Afternoon, June 19, 1979

Concurrent Sessions

Session 6 Contributed Papers

UMC Forum Room

D. Jameson, University of Houston

- 1:20 Baker, A. E. M. Colorado State University, Fort Collins, CO. Social and ecological correlates of gene flow in house mice. II. Behavior in a population cage.
- 1:40 Atmar, W. New Mexico State University, Las Cruces, N.M. The origins of intelligence: learning as part and parcel of Darwinian evolution.
- 2:00 Buth, D. G. University of California, Los Angeles, CA. Evolutionary genetics of tetraploid catostomid fishes of the genera Hypentelium and Thoburnia.
- 2:20 Zimmerman, E. G. North Texas State University, Denton, TX. Heterosis at an enzyme locus in fish inhibiting a thermally coarse-grained environment.
- 2:40 Ewing, E. P. University of New Mexico, Albuquerque, N.M. The comparative behavior of models involving the maintenance of detrimental gametes in populations.
- 3:00 Break
- 3:20 Li, W. H. University of Texas, Houston, TX. A mathematical model for studying genetic variation in terms of restriction endonucleases.

- 3:40 Rodell, C. Vanderbilt University, Nashville, TN. A consideration of male- and female-mediated gene flow in Mendelian populations.
- 4:00 Stearns, S. C. Reed College, Portland, OR. Why delay maturity.
- 4:20 Burr, H. E. and R. T. Schimke. Stanford University, Stanford, CA. Intragenomic DNA sequence homologies in the chicken and other members of the class Aves: DNA re-association under reduced stringency conditions.
- 4:40 Bargiello, T. and J. Grossfield. City College of New York, NY. Tre-haleses in Drosophila.
- 5:00 Meagher, L. R. Duke University, Durham, NC. Penetration of Darwinian theory into published biological research of the late nineteenth century.

Tuesday Afternoon, June 19, 1979

Concurrent Sessions

Session 7 Contributed Papers

UMC

Room ~~235~~ 235

C. Taylor, University of California at Riverside

- 1:20 Starmer, W. T. Syracuse University, Syracuse, NY. Evolution and speciation of cactus specific yeasts.
- 1:40 Tracey, M. L. Florida International University, Sweetwater, FL. X-Y translocations and sexual isolation in Drosophila melanogaster.
- 2:00 Vrijenhoek, R. C. Rutgers -- The State University, New Brunswick, NY. Cryptic species of flies and nematodes.
- 2:20 Gillis, J. E. Allegheny College, Meadville, PA. Disruptive selection for substrate color-matching in two sympatric morphs of a cryptic grasshopper.
- 2:40 Turner, B. J. and D. L. Grosse. Virginia Polytechnic Institute and State University, Blacksburg, VA. Speciation versus ecological polymorphism in the trophic differentiation of a group of stream dwelling fishes.
- 3:00 Break
- 3:20 Aquadro, C. F. and J. C. Patton. University of Georgia, Athens, GA. Salivary amylase variation in deer mice (Peromyscus maniculatus and P. leucopus): use in species identification.
- 3:40 Wake, D. B., S. Y. Yang and T. J. Papenfuss. University of California, Berkeley, CA. Natural hybridization and its evolutionary implications in tropical salamanders, genus Bolitoglossa.
- ~~4:00~~ Rosenzweig, M. L. University of Arizona, Tucson, AZ. Speciation dynamics of an Ordovician assemblage of marine invertebrates.

- 4:20 Hilburn, L. R. University of Notre Dame, Notre Dame, IN. Electrophoretic examination of hybrid breakdown between the mosquito species Aedes aegypti and Aedes mascarensis.
- 4:40 Zouros, E. Dalhousie University, Halifax, Nova Scotia. The chromosomal basis for sexual isolation in two species of Drosophila, D. arizonensis and D. mojavensis.
- 5:00 Murphy, R. W. University of California, Los Angeles, CA. Genetic consequences of relatively recent continental drift.

Wednesday Afternoon, June 20, 1979

Concurrent Sessions

Session 8 Contributed Papers

Chemistry Bldg. Room 140

R. Vrijenhoek, Rutgers University

- 1:20 Eastel, S. Griffith University, Queensland, Australia. The evolutionary genetics of the introduced South American toad, Bufo marinus in the Pacific Islands and Australia.
- 1:40 Sage, R. D. University of California, Berkeley, CA. Patterns of variability in Leopard frogs (Rana pipiens complex).
- ~~2:00~~ Tordoff, W. California State College, Stanislaus, Turlock, CA. Reproductive dynamics of the Pacific treefrog, Hyla regilla, in Central California.
- 2:20 Travis, J. Duke University, Durham, NC. The genetic control of growth rate differences in populations of larval anurans.
- 2:40 Kane, T. C. University of Cincinnati, Cincinnati, OH. Genetic variability and similarity in the Carabid cave beetle, Neaphaenops tellkampffii.
- 3:00 Break
- 3:20 Jameson, D. L. University of Houston, Houston, TX. Migration and selection in Bombina.
- 3:40 Snyder, T. P. Michigan Technological University, Houghton, MI. The use of conditioned medium in assessing frequency-dependent selection for survival in Drosophila.
- 4:00 Ochando, M. D. Universidad Complutense Madrid, Spain. Morphological variability in natural populations of Drosophila melanogaster.
- 4:20 Finnerty, V. Emory University, Atlanta, GA. Post-translational modification in Drosophila melanogaster.

Wednesday Afternoon, June 20, 1979

Concurrent Sessions

Session 9 Contributed Papers

Chemistry Bldg. Room 132

S. Bryant, University of Colorado

- 1:20 Meagher, T. R. Duke University, Durham, NC. The impact of sexuality upon life history in *Chamaelirium*, a dioecious perennial plant species.
- 1:40 Policansky, D. University of Massachusetts, Boston, MA. Sex change in jack-in-the pulpit (*Arisaema triphyllum*).
- 2:00 Clay, D. Duke University, Durham, NC. The differential establishment of chasmogamous seeds in natural populations of the grass *Danthonia*.
- 2:20 Layton, C. R. University of British Columbia, Vancouver, B.C., Canada. A comparison of the organization of variability in two species of *Plectritis* (Valerianaceae) with contrasting breeding systems.
- 2:40 Givnish, T. J. Harvard University, Cambridge, MA. Dioecy and dispersal in gymnosperms.
- 3:00 Break
- 3:20 Bryant, S. University of Colorado, Boulder, CO. Sex ratio trait, sex composition and relative abundance in *Drosophila pseudoobscura*.
- 3:40 Werren, J. University of Utah, Salt Lake City, UT. Sex ratio evolution in a parasitic wasp.
- 4:00 Grant, B. College of William & Mary, Williamsburg, VA. The evolution of frequency-dependent mate selection in the parasitic wasp, *Nasonia* (*Mormoniella*) *vitripennis*.
- 4:20 Brummond, D. B. Illinois State University, Normal, IL. Mating frequencies of long-lived neo-tropical Lepidoptera.

Wednesday Afternoon, June 20, 1979

Concurrent Sessions

Session 10 Contributed Papers

UMC

Forum Room

D. West, Virginia Polytechnic Institute

- 1:20 Rusterholz, K. A. University of Wisconsin, Madison, WI. Patterns of niche breadth in a guild of insectivorous birds.
- 1:40 Etges, W. J. University of Georgia, Athens, GA. Ecological genetic relationships among anurans of the southeastern piedmont and coastal plain in South Carolina.

- 2:00 Riggs, L. A. University of California, Santa Barbara, CA. Experimental effects of food availability and dispersal opportunity on micro-evolution of vole populations.
- 2:20 Redfield, J. A. CSIRO, Cleveland, Qld, Australia. Low heterozygosity in tropical, shallow-water crustaceans from the Gulf of Carpentaria, Australia and the trophic-stability hypothesis.
- 2:40 Reznick, D. The University of Pennsylvania, Philadelphia, PA. The impact of size specific predation on the evolution of life histories in Trinidadian guppies.
- 3:00 Break
- 3:20 Taylor, C. E. University of California, Riverside, CA. Evolution of resistance to pesticides; effects of insecticide decay rate.
- 3:40 Bierbaum, T. J. University of California, Davis, CA. Selection for interspecific competitive ability: an experimental test.
- 4:00 Pomerantz, M. J. University of California, San Diego, CA. Evolution of eclosion patterns and interference competition in *Drosophila*.
- 4:20 Martin, M. M. University of California, Davis, CA. Variation in competitive ability within populations of *Erodium*.
- 4:40 Mayeda, K. and S. Wadhwa. Wayne State University, Detroit, MI. Urinary proteins of the mongolian gerbil, *Meriones unguiculatus*.

Tuesday Afternoon, June 19, 1979

Session 11 Poster Session

UMC

Room 157

- Pagluiso, S. H. University of California, Davis, CA. Nitrate metabolism in two ecotypes of *Avena barbata*.
- Price, F. E. Hamilton College, Clinton, NY. A computer simulation for teaching natural selection, genetic drift and gene flow.
- Hiebert, R. D. United States Department of Interior, Denver, CO. The natural landmarks program of the Heritage Conservation and Recreation Service.
- Stansfield, W. D. California Polytechnic State University, San Luis Obispo, CA. The Science of Evolution.
- Woodruff, R. C. Bowling Green State University, Bowling Green, OH. Hybrid release of mutator activity and the genetic structure of natural populations.

Presidential Address

Time: 7 - 10 p.m., Tuesday, June 19

Kittredge - Dining Room

Professor Lincoln Brower: Evolutionary implications of the overwintering behavior of the monarch butterfly.