Phone: 661-255-1050 x2241
E-mail: mbryant@calarts.edu

Michael J. Bryant

Employment

2001-Present　　　　　　California Institute of the Arts, Valencia, CA
Faculty

I have developed 14 courses the School of Critical Studies at CalArts. Within the natural sciences, I have taught courses on animal behavior, evolution, conservation, genetics, nutrition and molecular biology and a lab course on experimentation with an emphasis basic chemistry. I also teach a course on the history of mathematics and a course in statistics. I regularly teach in the CalArts Summer School program and lead three groups of CalArts Students (BFA and MFA) on two- to three-week residencies at a wildlife sanctuary in Idaho where students learned about and made art centered on wolf conservation. I am currently involved with a partnership with UC Riverside's Center for Conservation and the Joshua Tree National Park where five to six students (BFA, MA and MFA) work in the park collecting data on a long-term plant monitoring project aimed at proactively addressing conservation issues under the threats of climate change.

2023-2025　　　　　　California Institute of the Arts, Valencia, CA
Interim Dean for the School of Critical Studies

2012-2023　　　　　　California Institute of the Arts, Valencia, CA
Associate Dean for the School of Critical Studies

2011-2012　　　　　　California Institute of the Arts, Valencia, CA
Interim Co-Dean for the School of Critical Studies

2011-2012　　　　　　California Institute of the Arts, Valencia, CA
Director of Academic Institutional Research

2008-2011　　　　　　California Institute of the Arts, Valencia, CA
Assistant Dean, Director of the Teaching and Learning Center

As the first director of the Teaching and Learning Center I was responsible for developing increased student advising for the General Education (Critical Studies) curriculum, Faculty professional development in areas of pedagogy and developing CalArts' Institutional Research capacity for regional accreditation and program review.

2003-2010　　　　　　Alpha Center, University of California, Riverside, CA
Staff Research Associate

I provide assistance with the experimental design and data analysis for an NSF funded project that seeks to enhance student mathematics achievement through professional development programs given to teachers in both mathematics and science. I provide input on treatment application, student and teacher evaluation, database construction and statistical analysis. I present the analyses at national meetings and workshops and to the teachers from the target school district. I am also directly involved with the professional development programs where I lecture on the on application of basic mathematical concepts to the life sciences. I worked on am

working on the development of modules linking state mathematics and science standards for grades four through eight.

2002   Alpha Center, University of California, Riverside, CA

Lecturer

I was a lecturer in the ALIAS (Accelerating Literacy Integrating Algebra and Science) program in conjunction with the Department of Biology and the Alpha Center. During this one-week program, I helped present modules on global climate patterns to teachers and students from the Alvord Unified School District. I developed an exercise on global warming that involved graphing skills, interpreting data and relating the data to current news articles

1994 – 2001   University of California, Riverside, CA

Teaching Assistant

As a Teaching Assistant I have been involved in a wide range of courses including Introductory Cell and Molecular Biology, Introductory Evolution and Ecology, Genetics and Animal Behavior. My duties ranged from giving lectures, assisting with laboratory setup and execution, leading discussions, the preparation and grading of quizzes, exams and lab reports.

1991 – 1993   Concordia University, Montreal, PQ, Canada

Lab Demonstrator

As a Lab Demonstrator for Introductory Animal Biology my duties included assisting with the laboratory component of an introductory survey class of the Animal Kingdom.

Education   1994 – 2001   University of California, Riverside, CA

Ph.D. Candidate ABD

I had advanced to candidacy in the Ph.D. program. My dissertation research was on the ecology of the Trinidadian guppy (*Poecilia reticulata*). I focused on population dynamics with an emphasis on movement patterns, growth and mortality rates in natural populations. This project involved extensive fieldwork in tropical streams, the use of newly developed mark-recapture methods and computer simulations. I compared streams with different predator communities to assess how resource levels and demographic variability may have influenced the evolution of life histories (i.e. age and size at maturity).

1991 – 1993   Concordia University, Montreal, PQ, Canada

M.Sc. Biology

My master's thesis examined how the distribution of resources (food or mates) in time influenced territorial behavior in a small freshwater fish (The Japanese medaka). My experiments tested a basic hypothesis of economic defense theory which can be applied to both territoriality and mating systems.

1987 – 1991   McGill University, Montreal, PQ, Canada
B.Sc. Biology

My emphasis during my major was in evolution, ecology and animal behavior. I completed an independent studies project on functional gut morphology of stream fishes.

Consulting

2000 – Present   California Institute of the Arts, Valencia, CA
Science and the Arts Consulting

I have worked with several artists as a science consultant. Projects have included conservation inspired videos and conceptualizing a film sound track utilizing amino acid sequences. A major project I worked on was a multidisciplinary project that combines ecology and new media art. *"Faster than a Speeding Bullet"* has had sponsorship from CalArts, the University of California, Irvine, The Banff Centre for the Arts, The Jerome Foundation and the National Performance Network's Creation Fund . My main contribution to this project is to present evolutionary and ecological theories that can be implemented in computer simulations. Our current model uses spatially explicit, individual based population dynamics models and genetic algorithms. Live performers interact with the simulation by altering aspects of the simulation's genetic architecture. I participated live at a show in Seattle and via the internet for a show in Pittsburgh. In a more analytic project, I develop a randomization test for an art history graduate student to quantitatively test a hypothesis about statue placement during the construction of a French Cathedral.

1991 – Present   Various Institutes
Statistical Consulting

I have been involved in numerous statistical consulting projects ranging from simple data analyses using standard commercial statistical programs (SAS) to the development of individualized computer programs for specific applications. A sample of the more involved projects includes: A randomization test that controls for observation intensity to estimate juvenile salmon territory size from behavioral data, a program that calculates surface areas and volumes of stream habitats for ecological studies of fish population dynamics, the development of Bootstrap/Jackknife programs for a quantitative genetics project and the construction of a Monte-Carlo based power analysis program to determine the required sample size for a rodent behavioral ecology grant proposal. Additionally, I presented a quarter long, informal workshop on the use of PROGRAM MARK for the analysis of mark-recapture data to students and faculty in the Department of Biology at UCR.

Publications and Referred/Invited Conference Presentations

Bryant, M.J. 2019 " Search Algorithms and Evolutionary Biology " at Algorithms, Infrastructures, Art, Curation. West Hollywood Library "

Bryant, M.J. 2018 "Chapter 5, Encyclopedia of Radical Doubt - Butterfly Effect, Chaos, Fuzzy Logic, and Randomness" in *Radical Doubt: the Joker System, after Boal*, by **M. Schutzman**, Routledge, in Imprint of the Taylor & Francis Group, 2018.

Kapur, A., Cook, P., & M. Bryant, 2013 "Teaching Computer Science to Digital Artists through Music and Sound," In Proceedings of the International Computer Music Conference. Perth, Australia,

Gatten, J and M. Bryant. 2010. Rock the CASBAH: CalArts' Student Behaviors and Habits. Art Documentation 29: 63-69.

Fast, L.A., J.L. Lewis, M.J. Bryant, K.M. Bocian, R.A. Cardullo, M. Rettig and K.A. Hammond. 2010. Does math self-efficacy mediate the effect of the perceived classroom environment on standardized math test performance? Journal of Educational Psychology. 102(3) 729-740.

Gordon, S.P., D.N. Reznick, M.T. Kinnison, M.J. Bryant, D.J. Weese, K. Räsänen, N.P. Millar, and .P. Hendry. "Adaptive changes in life history and survival following a new guppy introduction." *The American Naturalist* 174, no. 1 (2009): 34-45.

Bryant, M.J., K.A. Hammond, K.M. Bocian, M.F. Rettig, C.A. Miller and R.A. Cardullo. 2008 School Performance Will Fail to Meet Legislated Benchmarks. Science. 321:1781-1782.

Reznick, D. and M. Bryant 2007. Comparative long-term mark-recapture studies of guppies (*Poecilia reticulata*): differences among high and low predation localities in growth and survival. Annales Zoologici Fennici 44: 152–160.

Reznick, D. N., M. J. Bryant, and D. Holmes. *2006.* The evolution of senescence and post- reproductive lifespan in guppies (*Poecilia reticulata).* PLOS-Biology 4: 136-143.

Reznick, D., M.J. Bryant, D. Roff, C.K. Ghalambor and D. E. Ghalambor 2004. Effect of extrinsic mortality on the evolution of senescence in guppies. Nature 431, 1095-1099.

Bryant, M.J. and D. Reznick. 2004. Comparative Studies of Senescence in Natural Populations of Guppies. American Naturalist 163: 55-66.

Reznick, D., M. J. Bryant, and F. Bashey. 2002. *r-* and *K*-Selection revisited: The role of population density, resource availability, and environmental fluctuations in life-history evolution. Ecology 83:1509-1520.

Grether, G. F., D. F. Millie, M. J. Bryant, D. N. Reznick, and W. Mayea. 2001. Rainforest canopy cover, resource availability, and life history evolution in guppies. Ecology 82:1546-1559.

Zuk, M., M. J., Bryant, G. R., Kolluru, and V. Mirmovitch. 1996. Trade-offs in Parasitology, Evolution and Behavior. Parasitology Today **12**(2)**:**46-47.

Bryant, M. J., and J. W. A. Grant. 1995. Resource defence, monopolization and variation of fitness in groups of female Japanese medaka depend on the synchrony of food arrival. Animal Behaviour. **49**(6)**:**1469-1479.

Grant, J. W. A., M. J. Bryant, and C. E. Soos. 1995. Operative sex ratio, mediated by synchrony of female arrival, alters the variance of male mating success in Japanese medaka. Animal Behaviour. **49**(2)**:**367-375.

Grant, J. W. A., P. C. Casey, M. J. Bryant, and A. Shahsavarani. 1995. Mate choice by male Japanese medaka (Pisces, Oryziidae). Animal Behaviour. **50**(5)**:**1425-1428.

Kramer, D. L., and M. J. Bryant. 1995. Intestine length in the fishes of a tropical stream: 1. Ontogenetic allometry. Environmental Biology of Fishes. **42**(2)**:**115-127.

Kramer, D. L., and M. J. Bryant. 1995. Intestine length in the fishes of a tropical stream: 2. Relationships to diet - the long and short of a convoluted issue. Environmental Biology of Fishes. **42**(2)**:**129-141.

Awards received

GAANN Fellowship, University of California, Riverside 1998-1999.

Teaching Assistant of the Year. Department of Biology. University of California, Riverside. 1997-1998.

NSERC Fellowship 1994-1995, 1995-1996.

FCAR Fellowship 1992-1993.