

Michael Patrick Robinson
Gulliver Preparatory School
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CURRENT POSITION

2005-present Teacher, Science Department, Gulliver Preparatory Academy

EDUCATION

Ph.D., Biology – 2005 – Department of Biology, University of Miami, Coral Gables, FL
Dissertation Title: Role of the isopod *Anilocra partiti* in the health, behavior and mating success of the bicolor damselfish, *Stegastes partitus*.
Major Advisor: Dr. Steven M. Green

M.S., Zoology – 1999 – Department of Biology, University of South Florida, Tampa, FL
Thesis Title: Patterns of growth and the effects of scale on the feeding kinematics of the nurse shark, *Ginglymostoma cirratum*.
Major Advisor: Dr. Philip J. Motta

B.S., Honors – 1994 – Marine Science/Biology – University of Miami, Coral Gables, FL

Other Institutions Attended:

University of Washington, Friday Harbor Laboratories, Friday Harbor, WA –1997
James Cook University of North Queensland, Townsville, Australia, 1993

PREVIOUSLY HELD POSITIONS

2004-2005 Project Coordinator, EPA-RISEE grant, Barry University, Miami Shores
2002-2004 Teaching Assistant – Department of Biology, University of Miami
2000-2002 Resident Director – Hofstra University Marine Laboratory, St. Ann's Bay, Jamaica
1998-2000 Teaching Assistant – Department of Biology, University of Miami
2000 Network Research Assistant – Tropics Network of the Biological Inventory Program of the National Park Service
2000 Research Assistant – Department of Biology, University of Miami
1999 Graduate Coordinator – NSF & UM Department of Biology Summer Research in Ecology Program
1998-2003 Tutor – Educational Resources
1996 Graduate Research Fellow – Mote Marine Laboratory, Sarasota FL
1995-1997 Teaching Assistant – Department of Biology, University South Florida
1994-1995 Associate – Biometry Department, Boehringer-Ingelheim Pharmaceuticals, Inc., CT

AWARDS AND GRANTS

2005 West Marine Charitable Fund - \$2000
2004 William W. Behrens, Jr./Florida Institute of Oceanography Award – Best student paper in the marine sciences – \$750
2003 Am. Soc. Ichthyologists & Herpetologists Stoye Award – Best student oral paper, Ecology & Ethology – \$250

- 2002 PADI Foundation Grant – Effect of the parasite *Anilocra partiti* on mate choice and mating success in bicolor damselfish, *Stegastes partitus*. – \$5473
- 2000 Lerner-Gray Fund for Marine Research, American Museum of Natural History – Morphometrics of the sperm of labrid reef fishes related to the intensity of sperm competition. – \$1000
- 1999 University of Miami Graduate School GAFAC Fund – \$400
- 1996 Mote Marine Laboratory & University of South Florida Graduate Fellowship in Elasmobranch Biology – \$3250
- 1995 University Graduate Fellowship, College of Arts & Sciences (USF) – \$7000
- 1990 National Merit Scholarship – \$4000

TEACHING

Positions:

- 2005 Adjunct – Marine Science Program, Univ. of Miami
- 2003, 2005 Adjunct – Barry University, Miami Shores, FL
- 2002-2004 Teaching Assistant – Dept. of Biology, Univ. of Miami
- 2000-2003 Resident Director – Hofstra University Marine Laboratory, St. Ann's Bay, Jamaica
- 1998-2000 Teaching Assistant – Dept. of Biology, Univ. of Miami
- 1999 Graduate Coordinator – NSF & UM Dept. Biol. Summer Research in Ecology Program
- 1998-2002 Tutor – Educational Resources
- 1995-1997 Teaching Assistant – Dept. of Biology, Univ. of South Florida

Lecture Courses Taught:

- 2005 Survey of Oceanography, MSC 101, University of Miami
- 2003, 2005 Basic Research Methodology, BMS 507, Barry University

Classes TA'd:

Animal Behavior (UM), Biodiversity (USF), Biometry (UM), Cell and Molecular Biology (UM), Cellular Processes (USF), Comparative Vertebrate Anatomy (USF), Evolution & Biodiversity (USF), General Biology (UM), Howard Hughes Medical Institute Biology Laboratory (UM), Invertebrate Zoology (USF)

Student Research Advised:

- current Informal Advisor of Barry University Undergraduate Philip Gillis; Project: Fluctuating asymmetry and spawning performance of anurans.
- 2002 Hofstra Lab Internship Advisor, Nancy Glass; Primary project: Ecology of herbivorous fishes in seagrass beds.
- 2000 Hofstra Lab Internship Advisor, Julien Million; Primary project: Juvenile color and adult agonism in territorial damselfishes

Awards:

- 2005 Outstanding Teaching Assistant, Dept. of Biology, Univ. of Miami
- 2004 Outstanding Teaching Assistant, College of Arts & Sciences, Univ. of Miami
- 2003 Outstanding Teaching Assistant, Dept. of Biology, Univ. of Miami

Training:

- 1999 Writing Across the Curriculum – Instructional Advancement Center, UM
- 1997 Developing and Analyzing Multiple Choice Exams – Center for Teaching Enhancement (CTE), USF

1997 Promoting Active Student Involvement in Large Classes – CTE, USF

1996 Creating a Teaching Portfolio – CTE, USF

ABRIDGED TEACHING PHILOSOPHY

I have two main goals as an educator. I want to teach the facts of biology, but more importantly I strive to instill in my students the intellectual curiosity and reasoning skills necessary to become a good biologist. Many students are preoccupied with the idea of earning a good grade and all they want is the information requisite to achieve that goal. I prefer not to relate just the answer to them. I provide them with pertinent facts, and then by asking questions of the students, I encourage them to deduce the answer themselves. This requires more direct interaction with students than is provided by a simple lecture, so I suffuse my lectures with questions sometimes directed to anyone and sometimes directed at specific students. Through these intellectual exercises I hope to give students confidence in their ability to reason; an ability which will benefit them both in and out of science. I also try to provide interesting anecdotes and facts about biology, its history and the scientists who have made the history. This makes biology more exciting and helps the students enjoy learning more than just the minimum information. Finally, I encourage interdisciplinary thinking by introducing important concepts within the framework of the discussion. For example, I discuss the Bernoulli principle and ask students to apply it to sponge morphology or sand dollar feeding strategies. I might also introduce the concept of phylogenetic inertia to explain why one pair of legs of the decapod Alaskan king crab is diminutive. Following this pattern I hope not only to provide students with the intellectual abilities to be successful but to instill in them the desire to push themselves in and out of the classroom.

RESEARCH EXPERIENCE & AREAS OF COMPETENCE

2004 effects of ectoparasites on health and reproductive success of damselfish

2003 *Diadema* sea urchin grazing on reef algae

2002 observations of herbivory by seagrass parrotfishes

2002 effect of habitat on feeding and reproduction in sea urchins

2001 experimental tests of the role of juvenile color in damselfish agonism

2000-2002 effect of parasite, *Anilocra partiti*, on reproductive behaviors of host damselfish, including manipulation of parasite loads

2000-2002 biology of urchin-symbiotic shrimp *Gnathophyllodes mineri*

2000-2002 seagrass and urchin monitoring

1999 effects of sex ration on male-male aggression of mosquitofish

1999 sampling of mangrove reef fishes to examine habitat preferences

1995-2002 live collection of reef fishes

1998-2002 electron microscopy (SEM & TEM)

1998-1999 collection of reef fish gametes for SEM and TEM

1997 video recording (Hi-8, 30 fps) of spiny dogfish swimming including 3-D kinematic analyses

1996 SCUBA observations on feeding and aggressive interactions of juvenile parrotfishes in Florida Keys

1995-1998 high-speed underwater filming (180 fps, 8mm) & above-water videography (200 fps; NAC HSV-14B) of feeding of large (>200 cm) nurse sharks

1995-1998 detailed morphometric analyses of feeding apparatus of an ontogenetic range of nurse sharks (70 to 250 cm)

1995-1998 kinematic analyses of video sequences using SigmaScan Image and NIH Image applications

SERVICE

Scientific Community:

- 2005 Informal research mentor to Philip Gillis, Barry University
- 2004 Session Chair & Judge, FL-GA Louis Stokes Alliance for Minority Participation in Science, Technology, Engineering & Mathematics – 29 Jan to 1 Feb, Miami FL
- 2003 Florida Center for Ocean Science Education Excellence Community Building Workshop – 5 to 6 Dec, Dania Beach FL
- 2000 Scientific Judge, National Ocean Sciences Bowl
- 1999 Graduate Coordinator – NSF & UM Dept. Biology Summer Research in Ecology Program (junior high students)
- 1998 Biology Graduate Student Association Seminar Representative – U. Miami
- 1996-1998 Mentor, Science-by-Mail Program, Museum of Science, Boston
- 1996 Chair, Abstracts Committee. F.I.S.H. Meetings, Univ of South Florida

Manuscript reviewer for: *Environmental Biology of Fishes*

REFEREED PUBLICATIONS

- Maciá, S. & MPR (in press) Grazing patterns of parrotfishes are affected by habitat heterogeneity in seagrass beds. *Mar. Ecol. Prog. Ser.*
- Maciá, S., MPR, P. Craze, R. Dalton, & J.D. Thomas (2004) New observations on airborne jet propulsion (flight) in squid, with a review of previous reports. *J. Moll. Stud.* 70: 297-299.
- MPR & J.S. Prince (2003) Morphology of the sperm of two wrasses, *Thalassoma bifasciatum* and *Lachnolaimus maximus* (Labridae, Perciformes). *Bull. Mar. Sci.* 72(1): 247-252.
- MPR & P.J. Motta (2002) Patterns of growth and the effects of scale on the feeding kinematics of the nurse shark (*Ginglymostoma cirratum*). *J. Zool., Lond.* 256: 449-462.

Submitted

- MPR (in review) Face suckers aren't sexy: a large isopod reduces the mating success of male bicolor damselfish before reducing health. submitted to *Nature*
- MPR, J.M. Million & S. Maciá (in review) Co-existence of damselfishes mediated by the color of juveniles: the effect of juvenile color and size on agonism by adults of two damselfishes. submitted to *Ethology*
- MPR & S. Maciá (in review) Oral grasping by filefish (*Monacanthus tockeri*) in heavy seas. submitted to *Carib. J. Sci.*
- S. Maciá & MPR (in review) Growth and reproduction of the sea urchin *Tripneustes ventricosus* in adjacent coral reef and seagrass habitats. submitted to *J. exp. Mar. Biol. Ecol.*
- MPR, S. Maciá & N. Glass (in review) Observations on the movements and attachment patterns of newly released juvenile *Anilocra partiti*. submitted to *J. Crust. Biol.*

In Prep

- MPR & S. Maciá (in prep) Experimental manipulation of sea urchin *Diadema antillarum* density in Jamaica: implications for coral reef recovery. to be submitted to *Conserv. Biol.*
- MPR, S. Maciá, J.M. Million & N. Glass (in prep) Distribution of the parasitic isopod *Anilocra partiti* and its host, the bicolor damselfish (*Stegastes partitus*), across habitats and depths in St. Ann's Bay, Jamaica. to be submitted to *Mar. Biol.*
- MPR (in prep) Pathological effect of the isopod *Anilocra partiti* on its host, the bicolor damselfish (*Stegastes partitus*). to be submitted to *Int. J. Parasitol.*
- MPR (in prep) External parasites of the bicolor damselfish in Jamaica: interactions between a large isopod (*Anilocra partiti*) and other micro-parasites. to be submitted to *Mar. Ecol. Prog. Ser.*

- MPR** (in prep) The parasitic isopod *Anilocra partiti* affects the behaviour of male bicolor damselfish (*Stegastes partitus*). to be submitted to *Behaviour*
- MPR**, S. Maciá, & N. Glass (in prep) Male mate choice in bicolor damselfish and the role of the parasitic isopod *Anilocra partiti*. to be submitted to *Behav. Ecol.*
- MPR**, S. Maciá, J.M. Million & N. Glass (in prep) Ecological implications of parasitism of reef fishes by the isopod *Anilocra* spp. in St. Ann's Bay, Jamaica. to be submitted to *Mar. Biol.*
- N. Glass, **MPR**, S. Maciá (in prep) Use of seagrass blowouts by traditionally coral reef-associated fishes. to be submitted to *Env. Biol. Fish.*

ABSTRACTS AND PRESENTATIONS

Oral and Poster Presentations at Meetings

- Maciá, S., **MPR** & A.M. Nalevanko (2005) Manipulation of *Diadema antillarum* in an attempt to reduce algal cover on a coral reef. Oral Presentation, 7-9 April, Marine Benthic Ecology Meeting. Williamsburg, Virginia.
- Maciá, S., J.R. Montague & **MPR** (2005) Hydroponic rearing of turtlegrass (*Thalassia testudinum*) from the seed stage. Oral Presentation, 18-19 March, Florida Academy of Sciences. Tampa, Florida.
- MPR**, N. Glass & S. Maciá (2004) Does this parasite make me look fat? Male choice of female bicolor damselfish (*Stegastes partitus*) affected by a large, external parasite. Oral Presentation, 27 May-31 June, Am. Soc. Ichthyologists & Herpetologists. Norman, Oklahoma.
- MPR** & S. Maciá (2004) Queer eye for the fish guy: Are external parasitic isopods (*Anilocra*) a turn-off for female bicolor damselfish (*Stegastes partitus*)? Oral Presentation, 25-28 March, Marine Benthic Ecology Meeting. Mobile, Alabama.
- Maciá, S. & **MPR** (2004) Use of seagrass blowouts as refugia by parrotfishes of different sizes. Oral Presentation, 25-28 March, Marine Benthic Ecology Meeting. Mobile, Alabama.
- Nalevanko, A.M., S. Maciá & **MPR** (2004) Manipulation of the sea urchin *Diadema antillarum* in an attempt to reduce algae cover on coral reefs. Oral Presentation, 12-13 March, Florida Academy of Sciences. Orlando, Florida.
- MPR** (2004) Face suckers aren't sexy: effect of a parasitic isopod on mating success in male bicolor damselfish (*Stegastes partitus*). Oral Presentation, 12-13 March, Florida Academy of Sciences. Orlando, Florida.
- Maciá, S. & **MPR** (2004) Use of seagrass blowouts as refugia by parrotfishes of different sizes. Oral Presentation, 12-13 March, Florida Academy of Sciences. Orlando, Florida.
- MPR** (2003) Face suckers aren't sexy: mating success of male bicolor damselfish (*Stegastes partitus*) infected by the parasitic isopod *Anilocra partiti*. Oral Presentation, 26 June-2 July, Am. Soc. Ichthyologists & Herpetologists. Manaus, Brazil.
- MPR**, J.M. Million & S.M. Maciá (2003) Effect of juvenile color and size on agonism by adults of two damselfishes (*Stegastes*). Oral Presentation, 21-23 March, Florida Academy of Sciences. Orlando, Florida.
- MPR** (2000) Morphologies of the sperm of two wrasses: the bluehead wrasse, *Thalassoma bifasciatum*, and the hogfish, *Lachnolaimus maximus*. Poster Presentation, A.S.I.H. La Paz, Mexico.
- MPR** (1998) Kinematics of shark pectoral fin movements and their implications for lift-production. Oral Presentation, A.S.I.H. Guelph, ON, Canada.
- MPR** & P.J. Motta (1998) The effects of scale on the feeding kinematics of the nurse shark, *Ginglymostoma cirratum*. AES Symposium: Feeding Biology of Elasmobranch Fishes – Contributed Oral Presentation. A.S.I.H. Guelph, ON, Canada.
- MPR** & P.J. Motta (1997) Does size matter? Scaling and the prey capture kinematics of the nurse shark, *Ginglymostoma cirratum*. Poster Presentation, A.S.I.H. Seattle, WA.

Participation in Symposia

1998 American Elasmobranch Society Symposium: Feeding Biology of Elasmobranch Fishes – Contributed Oral Paper. E. Cortés & P.J. Motta, chairs.

Invited Seminars

2003 Face suckers aren't sexy: reproductive behavior of male bicolor damselfish (*Stegastes partitus*) parasitized by a large isopod. School of Natural and Health Sciences, Barry University, Miami Shores, FL.

2001 Marine biology education and research at the Hofstra University Marine Laboratory. Dept. of Zoology, Univ. West Indies, Kingston, Jamaica.

SKILLS AND CERTIFICATIONS

>20 years small boat experience

SCUBA: >500 dives, certifications:

Scientific Diver – 60 feet sea water (U. So. Florida)

Advanced Open Water Diver (PADI)

Equipment Specialist (PADI)

underwater photography & video

biological illustration

experienced with many computer applications (e.g. word-processing, spreadsheets, statistical, graphing, presentation)

conversationally fluent in German

PUBLISHED PHOTOGRAPHS

in Sumich & Morrissey (2004) *Marine Biology* textbook.

PROFESSIONAL AFFILIATIONS

American Elasmobranch Society

American Society of Ichthyologists and Herpetologists

Animal Behavior Society

Ecological Society of America

International Society for Behavioral Ecology

Southeast Division American Society of Ichthyologists and Herpetologists

Society for the Conservation of Reef Fish Aggregations

BIOGRAPHICAL INFORMATION

born: 17 November, 1971; Detroit, Michigan, USA

parents: Dr. Patrick A. Robinson, Brookfield, CT & Mrs. Linda Vitagliano, Collingswood, NJ

wife: Silvia M. Maciá; child: Javier S. Robinson

citizenship: USA